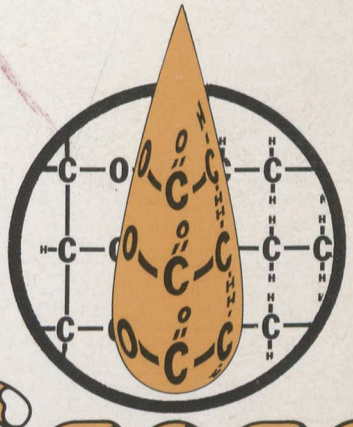
TP
680
.C3
1975



# Fats & Oils in Canada

ANNUAL REVIEW 1975


DEPARTMENT OF INDUSTRY, TRADE AND COMMERCE

# FATS AND OILS IN CANADA

## ANNUAL REVIEW

June 1976

Prepared By:

Grain Marketing Office
Department of Industry, Trade and Commerce
Ottawa, Ontario
Canada K1A 0H5

# TABLE OF CONTENTS

# INTRODUCTION

"Fats and Oils in Canada - Annual Review 1975" represents the third annual issue of the publication. No issues were published for the years 1970 to 1973 inclusive. This year the tables list quantities in metric tons in preparation for the adoption of the metric system by the Canadian grain and oilseed industry.

The feature article in this issue is written by Dr. Baldur Stefansson, University of Manitoba and deals with the development, current and future outlook for Tower rapeseed. Tower is the first representative of an improved rapeseed which will become a new standard of quality for the product. Dr. Stefansson was the co-discoverer and developer of Tower with Dr. Keith Downey, Agriculture Canada, Saskatoon. The Department joins with the readers of this publication in thanking Dr. Stefansson for this current update and look into the future for Canada's oilseed development.

The statistical data contained in the publication have been obtained from Statistics Canada, Environment Canada, Canadian Grain Commission, United States Department of Agriculture, and Oil World. The tables resulting from these data have been grouped into related product areas to permit ease of consideration. The total figures in the tables, particularly those dealing with imports and exports, have been rounded which accounts for any apparent discrepancies in the totals.

"Fats and Oils in Canada - Annual Review 1975" is intended to be a working document for people concerned with the development of the Canadian fats and oils industry. Suggestions and comments on this publication are welcome and should be addressed to:

Grain Marketing Office (40A),
Department of Industry, Trade
and Commerce,
Ottawa, Canada.
K1A 0H5

# CHAPTER 1

## TOWER SUMMER RAPE
## A MAJOR STEP IN THE DEVELOPMENT OF HIGH QUALITY RAPESEED

By

B. R. Stefansson

Canada has become the world's leading exporter of rapeseed and is playing a leading role in improving the quality of the product. The isolation of rape strain with seed oil practically free from erucic acid (Stefansson et al., 1961) which took place in Canada more than a decade ago, indicated that commercial varieties with this characteristic could be developed. Varieties which produce the new rapeseed oils were developed in response to serious questions concerning the role of long chain fatty acids, such as erucic, in nutrition (Vles, 1974). These new rapeseed oils contain only those fatty acids found in oils traditionally used for edible purposes. In 1975, practically all the rapeseed produced in Canada was of the low erucic acid type, the average erucic acid value for the entire crop was only 3.1%. Thus, the new improved product constitutes the bulk of Canadian rapeseed available for domestic and export markets.

Rapeseed which incorporates a second major improvement, low glucosinolate content, is becoming available in substantial quantities; approximately a half million acres of this kind of rapeseed were grown in Canada in 1975. This new class of rapeseed, thus far represented by a single variety, Tower, is often called "double low" rapeseed in Canada. Another name for the new improved product has been suggested in Germany; it is "Quality Rapeseed".

The residue which remains after the oil has been extracted from rapeseed is used as a protein supplement in animal rations. The amino acid balance in rapeseed protein is excellent; the levels of lysine are nearly equivalent to those of soybean protein, and methionine levels are substantially higher than in soybean protein. The availability of quantities of rapeseed and knowledge of the excellent nutritional properties of rapeseed protein has stimulated research directed toward developing high quality protein products from rapeseed for human use. Results of a feeding trial with low-glucosinolate rapeseed flour made at the Food Research Institute at Ottawa are extremely encouraging (Table I). The growth performance of rats fed the rapeseed

flour was excellent and the protein efficiency ratio (PER) for rapeseed protein was higher than for the milk protein, casein.

TABLE I

EVALUATION OF PROTEIN FROM TOWER RAPESEED FLOUR

| | Food Consumed g/4 wk. | Weight Gain g/4 wk. | PER corr. | Thyroid Weight mg/100 g body wt. |
|---|---|---|---|---|
| Casein | 381.1 ± 8.6 | 142.5 ± 4.5 | 2.50 ± 0.03 | 8.57 ± 0.82 |
| Tower RSF | 383.6 ± 9.6 | 150.7 ± 4.8 | 2.63 ± 0.03 | 6.45 ± 0.19 |

SOURCE: Jones, J.D., Food Research Institute, Ottawa.

While rapeseed protein is known to be of high nutritional quality, the use of rapeseed meal in rations for non-ruminant animals (hogs, poultry) has been limited to relatively low levels due to minor constituents, known as glucosinolates. These glucosinolates impart the characteristic sharp taste to many products from the mustard family, such as turnips, radishes and mustard. The large number of unfavourable results which have been obtained when rapeseed meal was fed to animals have been attributed to the glucosinolates, or more correctly, to the aglycons which result from the breakdown of glucosinolates. Intact glucosinolates are essentially innocuous, while the breakdown products (nitriles, isothiocyanates and oxazolidine-thione) are detrimental. Unfavourable effects attributed to these compounds include reduced feed intake, reduced feed efficiency, enlargement of the thyroid gland and an effect on the liver, especially in avian species.

The possibility of solving the problems associated with glucosinolates in rapeseed through changes in processing has been investigated intensively (Anjou, 1962). The glucosinolates can be neutralized or extracted from rapeseed in several different ways, but unfortunately most of the methods are too costly for large-scale use in the production of rapeseed meal. A process which involves heating of the seed prior to crushing (Reynolds and Youngs, 1964) has been adopted by Canadian rapeseed crushers (Beach, 1975). This process improves the quality of rapeseed meal by reducing the activity of enzymes which facilitate breakdown of glucosinolates, thereby reducing the proportion of nitriles and other breakdown products in rapeseed meal. This industrial process has been essential for the relatively high utilization of rapeseed meal in animal rations in Canada.

It has been obvious for some time that the best solution for the glucosinolate problem in rapeseed is to eliminate the component from rapeseed by plant breeding. This task could not be prosecuted successfully until a rapid method of analysis suitable for large numbers of small samples was developed (Youngs and Wetter, 1967). Use of this method of analysis led to the discovery of a genetically controlled source of low glucosinolates in the summer rape variety, Bronowski (Brassica napus) at Saskatoon in the same year (1967). Unfortunately this variety was not suitable for commercial production of rapeseed and it was necessary to undertake the laborious task of transferring the low glucosinolate characteristic into varieties suitable for commercial production in Canada. Such strains had been developed, tested and were near release in 1970. However, at this time it became necessary to add the low erucic acid characteristic to the combination of characteristics required in commercial varieties. This task was pursued with vigour and Tower, the first variety of the low erucic and low glucosinolate type, was licenced in Canada in 1974 (Stefansson, 1975). In the spring of that year, one million pounds of seed were distributed to producers and, in 1975, the new variety occupied about 500,000 acres, or about 12% of the rapeseed acreage in Canada.

Large-scale evaluation of rapeseed meal from low glucosinolate rapeseed began when sufficient quantities of seed and meal became available in the autumn of 1974. Feeding trials now in progress involve cattle, hogs and poultry. Preliminary results generally are quite favourable. The reduction of glucosinolate content of rapeseed by the introduction of Tower, to levels about one-tenth of those found in older varieties of the same species, has ameliorated or eliminated most of the animal feeding problems that had been associated with rapeseed meal. Data from a large number of experiments will be published soon. In the meantime, preliminary data from experiments with poultry (Tables II and III), dairy cows (Table IV) and pigs (Bowland, 1975) provide an indication of the favourable results which are being obtained. The indications are that meal from low glucosinolate rapeseed can be utilized in diets for cattle, hogs and poultry at levels at least double the levels currently recommended in Canada.

TABLE II

EFFECT OF SOYBEAN MEAL AND TOWER RAPESEED MEAL ON LAYERS

| Rations | Hen-Housed Production | Average Egg Weight gms. | Kg. Feed/ Doz. Eggs | Mortality % |
|---|---|---|---|---|
| Control Soybean Meal | 83 | 56.8 | 1.80 | 1.8 |
| Tower A Rapeseed Meal 5% | 83 | 57.4 | 1.76 | 4.4 |
| " A " " 10% | 85 | 56.9 | 1.72 | 1.8 |
| " B " " 5% | 85 | 56.8 | 1.75 | 0.4 |
| " B " " 10% | 85 | 56.6 | 1.73 | 1.4 |

SOURCE: Clandinin, D.R. and A.R. Robblee, University of Alberta.

TABLE III

EFFECT OF SOYBEAN MEAL, TARGET AND TOWER RAPESEED MEAL ON BROILERS

| Rations | Average Weight at 4 weeks gms. | Feed/Gain |
|---|---|---|
| Control Corn and Soybean Meal | 616 | 1.66 |
| Tower Rapeseed Meal at 10% | 648 | 1.66 |
| Tower " " " 20% | 658 | 1.60 |
| Tower " " " 40% | 601 | 1.68 |
| Target " " " 40% | 567 | 1.63 |

SOURCE: Slinger, S.J., University of Guelph.

TABLE IV

EFFECT OF TOWER RAPESEED MEAL AND SOYBEAN MEAL ON THE MILK PRODUCTION OF DAIRY COWS

| | Soybean Meal | Tower Rapeseed Meal 25% |
|---|---|---|
| Grain Intake (lbs.) | 21.5 | 21.7 |
| Total Intake (lbs.) | 45.1 | 44.6 |
| Milk Production (lbs.) | 47.2 | 47.9 |
| Milk Fat (%) | 3.8 | 3.7 |

SOURCE: Ingalls, J.R. and H.R. Sharma, University of Manitoba.

The entire Canadian rapeseed crop cannot be converted to the new "Quality Rapeseed" until double low varieties of turnip rape (the other commercial species, Brassica campestris, used for rapeseed production in Canada) become available. Double low strains of this species, developed by plant breeders, are in advanced stages of testing, and will be released as soon as agronomic performance is satisfactory. In the meantime, the average glucosinolate content of Canadian rapeseed can be expected to decrease, domestic crushers can crush low glucosinolate rapeseed, and identity-preserved lots of "quality rapeseed" can be made available to importers who may want to test the product.

While rapeseed from double low varieties, such as Tower, is a major step toward the development of high quality rapeseed, it does not include all improvements which now are possible. A number of genetically controlled variants have been identified in the breeding programs now in progress which indicate that further substantial improvements in the quality of rapeseed will be made. The erucic acid and glucosinolate levels in rapeseed can be reduced to extremely low levels; less than 0.05% for erucic acid and less than 0.1 mg/g for glucosinolates. When these low glucosinolate levels become commercially available in the form of new varieties, the need for heat treatment in the crushing process may be reduced and the rapeseed protein, not denatured by heat, may become more useful in applications where the functional properties of the protein are needed. The hull of yellow rapeseed is thinner than the hull of dark coloured seeds. Therefore, the fibre content of yellow seeds is approximately 30% lower than the fibre content of dark seeds. For this reason, plant breeders are developing varieties with yellow seed coat colour. A reduction in the percentage of a useless or even negative component, such as fibre, will be accompanied by percentage increases in valuable components such as oil and protein. These and other characteristics now being incorporated into Canadian rapeseed varieties will ensure continued improvement in the quality of Canadian rapeseed.

## REFERENCES

Anjou, K. "Manufacture of rapeseed oil and meal." In Rapeseed cultivation, composition, processing and utilization. Elsevier Pub. Co. (1962) 198-218.

Beach, D. "Primary processing of vegetable oils." In Oilseed and pulse crops in Western Canada. Western Co-operative Fertilizers Ltd., Box 2500, Calgary, Alberta (1975) 541-550.

Bowland, J.P. Evaluation of low glucosinolate - low erucic acid rapeseed meals as protein supplements for young growing pigs, including effects on blood serum constituents. Can. J. Animal Sci. 55(1975) 409-420.

Jones, J.D. Problems associated with substitution of plant proteins in human nutrition. Annual Meeting of Federation of Biological Societies, Winnipeg (1975).

Reynolds, J.R. and C.C. Youngs. Effect of seed preparation on efficiency and oil quality in filtration extraction of rapeseed. J.A.O.C.S. 41(1964) 63-65.

Stefansson, B.R., F.W. Hougen, and R.K. Downey. Selection of rapesplants (Brassica napus) with seed oil practically free from erucic acid. Can. J. Plant Sci. 41(1961) 218-219.

Stefansson, B.R. Tower summer rape. Can. J. Plant Sci. 55(1975) 343-344.

Vles, R.P. "Nutritional aspects of rapeseed oils." In Proceedings of International Rapeseed Conference, Giessen, Germany (1974) 17-30.

Youngs, C.G. and L.R. Wetter. Microdetermination of the major individual isothiocyanates and oxaxolidinethiones in rapeseed. J. Amer. Oil Chem. Soc. 44(1967) 551-554.

# CHAPTER 2

## WORLD PRODUCTION AND TRADE IN OILSEEDS, FATS, OILS AND MEALS

### World Production of Oils and Fats

The world production of oils and fats declined in 1975 by one million metric tons as compared to 1974 (Table 1). The projected 1976 production of oils and fats at 48.6 million metric tons is 2.85 million metric tons above the preliminary estimate of the 1975 production, then continuing to show the upward trend which has been evident since 1970.

The projected 1976 increase in the production of soft oils of 2.2 million metric tons results from the increased world demand for protein meals which in turn results in increased soybean oil production.

In the palm and lauric oil sector, production continues to increase as palm and coconut plantations mature. Since 1970 production has increased by 65% with an average annual increase of 9.3%.

The 1975 decline in the production of industrial oils results from a general worldwide recession, coupled with relatively high prices which have decreased the demand for industrial oils.

The world production of animal fats has remained fairly constant since 1970 and continues to show no significant trend. This also appears to be the situation with regard to marine oils.

### World Production of Selected Oilseed Meals and Fish Meal

The production of oilseed meals continues to increase. The projected production in 1975/76 of 67.8 million metric tons is 10.9 million metric tons higher than the 1971/72 production (Table 2). A modest recovery from the 1974/75 economic recession has resulted in an increase in the number of livestock and poultry on feed, thereby increasing the demand for protein meal. Soybean meal production in Brazil and the United States mainly accounts for the increased production of oilseed meals.

Fish meal and solubles production is expected to decline by 190,000 metric tons in 1975/76 compared to the 1974/75 production, primarily due to the uncertainty of anchovy fishing off Peru.

## World Net Exports of Oilseeds, Oils and Fats

In the oilseed sector the world net export availability in 1975/76 of 31.3 million metric tons is almost 12 million metric tons higher than in 1974/75 (Table 3). This large increase in availability is accounted for by the increase in production of Brazilian and U.S. soybeans.

The export availability of oils and fats in the food sector is expected to increase by 581,000 metric tons in 1975/76 over 1974/75 continuing an upward trend which has been evident since 1972/73. Increased availability of olive, soybean and peanut oils are mainly responsible for the increase.

In the non-food sector increased production of castor oil accounts for most of the increased export availability of 94,000 metric tons in 1975/76 over 1974/75.

## World Net Exports and Availabilities of Oilmeals

World net exports of oilmeals on an actual weight basis are estimated to increase in 1975/76 by 3.13 million metric tons over 1974/75 (Table 4). Soybean meals continue to dominate the world oilseed meal market.

The net exports of fish meal on an actual weight basis in 1975/76 are estimated at 282,000 metric tons less than 1974/75 due largely to the uncertainty of anchovy fishing off Peru.

TABLE 1

WORLD PRODUCTION OF OILS AND FATS (OIL OR FAT EQUIVALENT)
ANNUAL 1970-75 AND 1976 PROJECTIONS[1/]

(Thousands of Metric Tons)

| Commodity | 1970 | 1971 | 1972 | 1973 | 1974 | 1975[2/] | 1976 |
|---|---|---|---|---|---|---|---|
| EDIBLE VEGETABLE OILS: | | | | | | | |
| Cottonseed | 2,621 | 2,636 | 2,860 | 3,006 | 3,149 | 3,203 | 2,940 |
| Peanut | 3,271 | 3,368 | 3,518 | 2,924 | 3,009 | 3,039 | 3,400 |
| Soybean | 6,066 | 6,238 | 6,719 | 7,362 | 9,173 | 8,105 | 9,810 |
| Sunflower | 3,802 | 3,612 | 3,637 | 3,576 | 4,508 | 3,972 | 3,755 |
| Rapeseed | 1,878 | 2,476 | 2,556 | 2,396 | 2,396 | 2,490 | 2,700 |
| Sesame | 591 | 721 | 655 | 616 | 637 | 660 | 677 |
| Safflower | 211 | 226 | 300 | 239 | 212 | 226 | 335 |
| Olive[3/] | 1,245 | 1,452 | 1,559 | 1,445 | 1,535 | 1,379 | 1,640 |
| Corn | 277 | 280 | 287 | 303 | 303 | 284 | 305 |
| Total | 19,962 | 21,009 | 22,091 | 21,867 | 24,922 | 23,358 | 25,562 |
| PALM OILS[4/]: | | | | | | | |
| Coconut | 2,135 | 2,434 | 2,792 | 2,414 | 2,100 | 2,650 | 2,855 |
| Palm Kernel | 439 | 462 | 455 | 434 | 484 | 513 | 535 |
| Palm | 1,715 | 1,907 | 2,143 | 2,250 | 2,594 | 2,909 | 3,224 |
| Babassu Kernel[5/] | 85 | 72 | 107 | 105 | 105 | 105 | 96 |
| Total | 4,374 | 4,875 | 5,497 | 5,203 | 5,283 | 6,177 | 6,710 |
| INDUSTRIAL OILS: | | | | | | | |
| Linseed | 1,110 | 1,245 | 870 | 730 | 792 | 795 | 844 |
| Castor | 373 | 348 | 322 | 412 | 490 | 400 | 410 |
| Oiticica | 18 | 20 | 14 | 1 | 11 | 11 | 11 |
| Tung | 130 | 141 | 140 | 96 | 128 | 102 | 115 |
| Olive Residue[6/] | 117 | 132 | 130 | 139 | 165 | 141 | 160 |
| Total | 1,748 | 1,886 | 1,476 | 1,378 | 1,586 | 1,449 | 1,540 |

TABLE 1 (Cont'd)

WORLD PRODUCTION OF OILS AND FATS (OIL OR FAT EQUIVALENT)
ANNUAL 1970-75 AND 1976 PROJECTIONS[1/]

(Thousands of Metric Tons)

| Commodity | 1970 | 1971 | 1972 | 1973 | 1974 | 1975[2/] | 1976 |
|---|---|---|---|---|---|---|---|
| ANIMAL FATS: | | | | | | | |
| Butter (fat content) | 4,114 | 4,097 | 4,375 | 4,525 | 4,477 | 4,520 | 4,520 |
| Lard[7/] | 4,126 | 4,428 | 4,387 | 4,256 | 4,459 | 4,325 | 4,300 |
| Tallow and Greases | 4,354 | 4,579 | 4,528 | 4,434 | 4,924 | 4,700 | 4,700 |
| Total | 12,594 | 13,104 | 13,290 | 13,215 | 13,860 | 13,545 | 13,520 |
| MARINE OILS: | | | | | | | |
| Whale | 70 | 70 | 65 | 55 | 40 | 45 | 45 |
| Sperm Whale | 140 | 135 | 125 | 125 | 120 | 115 | 115 |
| Fish (including liver) | 1,038 | 1,170 | 930 | 805 | 990 | 1,025 | 1,075 |
| Total | 1,248 | 1,375 | 1,120 | 985 | 1,150 | 1,185 | 1,235 |
| Grand Total | 39,926 | 42,249 | 43,474 | 42,648 | 46,801 | 45,714 | 48,567 |

1/ Years indicated are those in which the predominant share of the given oil was produced.
2/ Preliminary.
3/ Excludes olive residue oil.
4/ Estimated on the basis of exports and information available on consumption in the various producing area.
5/ Mill Production 1965 only.
6/ Includes quantities of refined oil for edible purposes.
7/ Revised series. Rendered lard only in most countries, total includes estimate around 500,000 for China.

SOURCE: United States Department of Agriculture, FOP 8/75

TABLE 2

WORLD PRODUCTION OF SELECTED OILSEED MEALS & FISH MEAL

(Thousands of Metric Tons)

| OILSEED MEALS[1/] | 1971/72 | 1972/73 | 1973/74[2/] | 1974/75[2/] | 1975/76[2/] |
|---|---|---|---|---|---|
| Soybean Meal | 31,366 | 33,068 | 38,480 | 36,772 | 42,580 |
| Cottonseed Meal | 8,845 | 9,469 | 9,504 | 9,596 | 8,790 |
| Peanut Meal | 4,107 | 3,458 | 3,560 | 3,559 | 4,075 |
| Sunflower Meal (c) (d) | 4,152 | 3,983 | 4,856 | 4,394 | 3,890 |
| Rapeseed Meal (a) | 3,743 | 4,000 | 3,868 | 3,894 | 4,210 |
| Sesame Meal | 817 | 771 | 767 | 750 | 745 |
| Copra Meal | 1,581 | 1,465 | 1,221 | 1,439 | 1,630 |
| Palm Kernel Meal | 545 | 491 | 509 | 560 | 595 |
| Linseed Meal | 1,711 | 1,502 | 1,293 | 1,155 | 1,300 |
| TOTAL | 56,857 | 58,207 | 64,068 | 62,119 | 67,815 |
| Fish Meal & Solubles (b) (f) (g) (i) (h) | 4,759 | 3,761 | 4,044 | 4,360 | 4,170 |
| WORLD TOTAL | 61,626 | 61,968 | 68,102 | 66,479 | 71,985 |

NOTE: (a) Including mustard meal.
(b) Corpesca data, excluding minor meals.
(c) Might include small amounts of other meals.
(d) Excluding small amounts produced on farms in Rumania.
(f) Excluding Faeroe Islands.
(g) Solubles included at 50% of weight.
(h) Including scrap cake and fish scrap cake from waste; solubles included at 48% of weight.
(i) Excluding whale meal where separable.

1/ Crop year - October/September.

2/ Preliminary

SOURCE: "Oil World", Hamburg, February 20, 1976.

TABLE 3

WORLD NET EXPORTS OF OILSEEDS, OILS AND FATS

(Thousands of Metric Tons)

| | 1972/73 | 1973/74 | 1974/75[1] | 1975/76[2] |
|---|---|---|---|---|
| OILSEEDS | (Crop Year - October/September) | | | |
| Soybeans | 14,757 | 17,566 | 15,435 | 26,480 |
| Cottonseed | 307 | 298 | 227 | 209 |
| Peanut (for crush only) | 459 | 451 | 434 | 500 |
| Sunflowerseed | 430 | 372 | 287 | 400 |
| Rapeseed | 1,782 | 1,265 | 1,047 | 1,620 |
| Sesame | 275 | 259 | 250 | 261 |
| Copra | 1,155 | 597 | 978 | 1,047 |
| Palm Kernels | 345 | 361 | 342 | 345 |
| Linseed | 607 | 409 | 296 | 368 |
| Castor Beans | 105 | 106 | 85 | 100 |
| TOTAL | 20,222 | 21,684 | 19,381 | 31,330 |
| OILS AND FATS | | | | |
| Soybean Oil | 596 | 702 | 669 | 975 |
| Cotton Oil | 348 | 327 | 401 | 346 |
| Peanut Oil | 474 | 341 | 309 | 482 |
| Sunflower Oil | 581 | 708 | 693 | 508 |
| Rapeseed Oil | 384 | 241 | 384 | 289 |
| Olive Oil[3] | 328 | 231 | 193 | 431 |
| Coconut Oil | 606 | 583 | 709 | 793 |
| Palm Kernel Oil | 187 | 205 | 235 | 262 |
| Palm Oil | 1,186 | 1,291 | 1,860 | 1,881 |
| Butter (fat cont.) | 748 | 850 | 724 | 825 |
| Lard | 468 | 525 | 546 | 497 |
| Fish Oil | 532 | 596 | 525 | 540 |
| TOTAL, PRIMARILY FOOD | 6,438 | 6,600 | 7,248 | 7,829 |
| Linseed Oil | 228 | 158 | 150 | 175 |
| Castor Oil | 173 | 204 | 130 | 212 |
| Tung Oil | 60 | 50 | 47 | 38 |
| Tallow & Greases | 1,529 | 1,614 | 1,543 | 1,539 |
| TOTAL, PRIMARILY NON-FOOD | 1,990 | 2,026 | 1,870 | 1,964 |

1/ Preliminary.

2/ Export availabilities

3/ Includes residue oil.

SOURCE: "Oil World", Hamburg, December 12, 1975.

TABLE 4

WORLD NET EXPORTS AND AVAILABILITIES OF OILMEALS
(Thousands of Metric Tons)

| Actual Weight | A. Net Export Availabilities | | | | B. Actual Net Exports | | | |
|---|---|---|---|---|---|---|---|---|
| | 1972/73 [2] | 1973/74 [2] | 1974/75 [2] | 1975/76 [2] | 1972/73 | 1973/74 [1] | 1974/75 [1] | 1975/76 [2] |
| | (Crop Year - October/September) | | | | (Crop Year - October/September) | | | |
| Oilseed Meals | | | | | | | | |
| Soybean | 18,130 | 22,700 | 21,900 | 28,600 | 18,027 | 20,385 | 19,412 | 22,000 |
| Cottonseed | 1,735 | 1,215 | 1,140 | 993 | 1,692 | 1,126 | 1,047 | 930 |
| Groundnut | 1,880 | 1,440 | 1,330 | 1,612 | 1,835 | 1,359 | 1,215 | 1,450 |
| Sunflower | 730 | 500 | 460 | 536 | 706 | 467 | 427 | 500 |
| Rapeseed | 1,320 | 915 | 760 | 1,048 | 1,172 | 862 | 643 | 850 |
| Sesame | 190 | 178 | 170 | 171 | 185 | 172 | 162 | 165 |
| Copra | 1,090 | 775 | 1,020 | 1,081 | 1,065 | 763 | 990 | 1,060 |
| Palm Kernel | 465 | 530 | 550 | 568 | 445 | 517 | 527 | 550 |
| Linseed | 900 | 685 | 640 | 655 | 825 | 616 | 578 | 590 |
| Unspecified (c) | 835 | 780 | 690 | 732 | 825 | 762 | 672 | 710 |
| Total | 27,275 | 29,718 | 28,660 | 35,996 | 26,777 | 27,029 | 25,673 | 28,805 |
| Fish Meal | 1,400 | 1,560 | 2,170 | 1,845 | 1,396 | 1,380 | 2,092 | 1,810 |
| Grand Total | 28,675 | 31,278 | 30,830 | 37,841 | 28,173 | 28,409 | 27,765 | 30,615 |
| Excess of A. over B. | 502 | 2,869 | 3,065 | 7,226 | | | | |
| Raw Protein Basis (b) | | | | | | | | |
| Oilseed Meals | | | | | | | | |
| Soybean | 8,158 | 10,215 | 9,745 | 12,870 | 8,112 | 9,173 | 8,638 | 9,900 |
| Cottonseed | 659 | 462 | 433 | 377 | 643 | 428 | 398 | 353 |
| Groundnut | 902 | 691 | 638 | 774 | 881 | 652 | 583 | 695 |
| Sunflowerseed | 270 | 185 | 170 | 198 | 261 | 173 | 158 | 185 |
| Rapeseed | 449 | 311 | 258 | 356 | 398 | 293 | 219 | 289 |
| Sesame | 76 | 71 | 68 | 68 | 74 | 69 | 65 | 66 |
| Copra | 229 | 163 | 214 | 227 | 224 | 160 | 208 | 223 |
| Palm Kernel | 79 | 90 | 93 | 97 | 76 | 88 | 90 | 93 |
| Linseed | 297 | 226 | 211 | 216 | 272 | 203 | 191 | 195 |
| Unspecified (c) | 308 | 289 | 255 | 271 | 305 | 282 | 249 | 263 |
| Total | 11,427 | 12,703 | 12,085 | 15,454 | 11,246 | 11,521 | 10,799 | 12,263 |
| Fish Meal | 910 | 1,014 | 1,410 | 1,200 | 907 | 897 | 1,360 | 1,176 |
| Grand Total | 12,337 | 13,717 | 13,495 | 16,654 | 12,153 | 12,418 | 12,159 | 13,439 |
| Excess of A. over B. | 184 | 1,299 | 1,336 | 3,215 | | | | |

TABLE 4 (Cont'd)

NOTE: (a) Of countries being net exporters of the respective meal and seed combined.

(b) Average raw protein content of oil cake/expeller/meal. Oilseeds are converted into crude oil and oilmeals, and the latter into raw protein basis, at the following percentage rates:

| | Crude Oil | Oilmeal | Raw Protein Content of Meal |
|---|---|---|---|
| Soybeans | 18(c) | 79.5(a) | 45(f) |
| Cottonseed | 17.5 | 59(b) | 38 |
| Groundnuts, shelled | 44.5 | 55 | 48 |
| Sunflowerseed | 42(e) | 53(b, e) | 37 |
| Rapeseed | 38.5(d) | 59(d) | 34 |
| Sesameseed | 47 | 52 | 40 |
| Copra | 63.5 | 36 | 21 |
| Palm Kernels | 46.5 | 52.5 | 17 |
| Linseed | 34 | 63 | 33 |
| Castor Beans | 45 | - | - |
| Other Oilseeds | 33 | 60 | 37 |
| Fish Meal | - | - | 65 |

(a) Mostly including hull meal. (b) Partly including hulls. (c) Up to 30 September 1973: 17.5%. (d) Up to 31 December 1972: 40% for the oil and 57% in the case of meal. (e) Up to 31 December 1971: 44% for the oil and 55% for the meal. (f) Oct./Sept. 74/75: 44.5%.

(c) Except castor bean.

1/ Preliminary.

2/ Estimated.

SOURCE: "Oil World", Hamburg, December 12, 1975.

# CHAPTER 3

## CANADIAN PRODUCTION AND TRADE IN OILSEEDS, FATS, OILS AND MEALS

### Canadian Production of Fats and Oils

Canadian production of edible vegetable oils declined slightly in 1975 compared to 1974 but remained well above the average of the previous four years (Table 5). Soybean oil production declined in 1975 by 12,000 metric tons. To some extent this resulted from the loss of the Commonwealth preferential tariff in the U.K. market which reduced the demand for imports of soybean oil from Canada. Rapeseed oil production rose by 11,900 metric tons because of increased Canadian crushing capacity. As will be noted later, this increase refers to the calendar year 1975 rather than to the crop year 1974/75. Sunflowerseed oil production has been in decline since 1972 due to fluctuations in the production of oil producing varieties of sunflowerseed.

In contrast to edible vegetable oils, production of animal fats increased by 10,000 metric tons in 1975 over 1974 because of a 20% increase in butter production, then continuing the upward trend which has been evident since 1972.

The decrease in marine oil production reflects declining fish stocks and generally lower activity in the fishing industry.

In the inedible oil sector no statistics are published for linseed oil production because of the secrecy requirements of the Statistics Act, but it is obvious that linseed oil production has been decreasing since 1972.

In general, total Canadian production of edible and inedible oils and fats has remained fairly constant over the past five years, varying from 600,000 metric tons to 650,000 metric tons.

### Canadian Imports of Fats and Oils

Canadian imports of vegetable oils in the primary edible oil sector in 1975 were well above the previous four

year average (Table 6). Imports of low-priced, duty-free, palm, coconut and palm kernel oils accounted for the increase.

Importations of animal fats in 1975 declined significantly from the previous two years no doubt as a result of increased Canadian production, particularly of butter. Imports of marine oils remained essentially at the same level in 1975 as in 1974 but this was significantly lower than in 1971-1973.

Imports of inedible oils and fats continued the decline which began in 1972 reflecting a slowdown in industrial activity due to the economic recession.

## Canadian Exports of Fats and Oils

Exports of edible vegetable oils increased slightly in 1975 over 1974 but were well below exports in 1971, 1972 and 1973, reflecting increased competition from competing oilseeds and oils as well as reduced demand due to a worldwide economic recession. Rapeseed and rapeseed oil accounted for the increase (Table 7). Soybeans and soybean oil exports decreased sharply due to the loss of the preferential tariff in the U.K.

Animal fat exports remained negligible. Marine exports declined sharply as a result of decreased activity in the fishing industry.

In the inedible sector exports continued the decline which began in 1971. Flaxseed and linseed oil have been mainly responsible for the decline in exports due to decreased worldwide industrial activity.

## Canadian Oilseeds: Acreage, Yield, Production

Since the peak year of 1971 rapeseed acreage has stabilized between three to four million acres. Yields per acre which declined from 1972 to 1974, have improved in 1975 because of the introduction of new higher yielding varieties of low erucic acid rapeseed (Table 8).

Soybean acreage has remained relatively stable since 1971. Production is generally restricted to southwestern Ontario because most other areas of Canada do not have sufficient heat units for crop maturity. The acreage is not expected to expand significantly until varieties with a wider heat unit range are developed.

Flaxseed acreage has declined since 1971 in response to a decrease in world demand caused by a slowdown in industrial activity and increased utilization of other oils for industrial applications.

Mustardseed and sunflowerseed are relatively minor crops and are mostly grown under contract. The acreage of mustardseed dropped sharply in 1975 since the returns to the producer were below that which could be attained from cereal grain production.

New varieties of sunflowers are required (i.e. earlier maturing, increased oil content) if sunflower is to become a significant oilseed crop in western Canada.

## Canadian Crushings of Vegetable Oilseeds and Production of Oil and Meal by Crop Year

Despite a doubling of crushing capacity in the period 1969 to 1975 rapeseed crushing declined by 58,500 metric tons in 1974/75 as compared to 1973/74 (Table 10). This resulted in a reduction of rapeseed oil production for the crop year 1974/75 of 17,100 metric tons. It should be noted, however, that for the calendar year 1975, rapeseed oil production was 11,900 metric tons greater than in the calendar year 1974. Rapeseed oil in 1974/75 was uncompetitively priced relative to competing vegetable oils, consequently both domestic and foreign demand decreased resulting in a decreased crush.

Canadian crushings of soybeans have remained relatively constant over the past five years in volume of crush, oil and meal production.

The flaxseed crush is not reported in 1974/75 because of the secrecy requirements of the Statistics Act but the crush has been declining rapidly since 1971/72 due to reduced demand for industrial oils.

Crushing of sunflowerseed has declined because of reduced domestic seed production.

TABLE 5

## CANADIAN PRODUCTION OF FATS AND OILS

(Metric Tons)

| | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| PRIMARILY EDIBLE[1] VEGETABLE OILS | | | | | |
| Soybean Oil[2] | 111,563 | 103,352 | 91,421 | 122,417 | 113,106 |
| Rapeseed Oil[3] | 86,776 | 115,212 | 144,580 | 112,873 | 124,773 |
| Sunflowerseed Oil[4] | 8,304 | 13,033 | 13,233 | 7,913 | 3,172 |
| TOTAL[5] | 206,643 | 231,597 | 249,234 | 243,203 | 241,051 |
| ANIMAL FATS | | | | | |
| Edible Tallow | 17,593 | 19,860 | 18,476 | 16,883 | 17,000 |
| Lard | 62,827 | 55,117 | 50,415 | 50,216 | 43,240 |
| Butter (as butter oil)[6] | 108,791 | 110,355 | 80,096 | 88,258 | 106,425 |
| TOTAL | 189,211 | 185,332 | 148,987 | 155,357 | 166,665 |
| MARINE OILS | | | | | |
| Herring | 21,761 | 12,834 | 11,732 | 7,122 | 5,044 |
| Seal | 1,216 | 1,505 | - | - | - |
| Whale[7] | 2,590 | 2,739 | 283 | - | - |
| Other[8] | - | - | - | 428 | 44 |
| TOTAL[9] | 25,567 | 17,078 | 12,015 | 7,550 | 5,088 |
| TOTAL EDIBLE OIL PRODUCTION | 421,421 | 434,007 | 410,236 | 406,110 | 412,804 |
| PRIMARILY INEDIBLE | | | | | |
| Linseed Oil[10] | 25,941 | 27,912 | 13,572 | X[11] | X[11] |
| Inedible Tallow | 182,013 | 183,693 | 186,003 | 182,727 | 182,491 |
| Marine Oils[12] | 4,568 | 3,439 | 925 | 2,869 | 4,471 |
| TOTAL INEDIBLE OILS PRODUCTION | 212,522 | 215,044 | 200,500 | 185,596 | 186,962 |
| TOTAL EDIBLE AND INEDIBLE FATS AND OILS PRODUCTION (Excluding Linseed Oil in 1974) | 633,943 | 649,051 | 610,736 | 591,706 | 599,766 |

TABLE 5 (Cont'd)

1/ Production data for corn oil and cocoa butter are confidential and have not been included.

2/ Soybean oil output of Canadian crushing mills.

3/ Rapeseed oil output of Canadian crushing mills. The Grain Research Laboratory of the Canadian Grain Commission has reported the average oil content of carlot survey samples of rapeseed as follows:

| | |
|---|---|
| 1970/71 | 44.6% (dry matter basis) |
| 1971/72 | 43.9% (dry matter basis) |
| 1972/73 | 40.2% (8.5% moisture basis) |
| 1973/74 | 39.9% (8.5% moisture basis) |
| 1974/75 | 40.9% (8.5% moisture basis) |

4/ Sunflowerseed oil output of Canadian crushing mills.

5/ Includes only crude vegetable oils produced in Canadian mills.

6/ Butter oil represents the oil equivalent of creamery butter, farm butter and whey butter production, using 81% as the conversion factor.

7/ Whale oil production includes small amounts of other unspecified marine oils.

8/ Other oil production includes seal oils.

9/ Small quantities of salmon oil (West Coast) and of redfish oil (East Coast) of edible grade cannot be identified statistically and are included under "Marine Oils" in the inedible category below.

10/ Linseed oil output of Canadian crushing plants. The Grain Research Laboratory of the Canadian Grain Commission has reported the average oil content (dry matter basis) of carlot survey samples of flaxseed as follows:

| | |
|---|---|
| 1970/71 | 42.4% |
| 1971/72 | 42.2% |
| 1972/73 | 42.4% |
| 1973/74 | 42.4% |
| 1974/75 | 43.1% |

11/ Confidential - to meet secrecy requirements of Statistics Act.

12/ Includes liver oils, groundfish oil, salmon oil and small amounts of unspecified oils.

SOURCE: Statistics Canada, Catalogue Nos. 22-006, 24-002, 32-002, 32-0020.

TABLE 6

CANADIAN IMPORTS OF FATS AND OILS

(Metric Tons)

| PRIMARILY EDIBLE<br>Vegetable Oils | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Soybeans (Oil Equiv.) | 75,164 | 54,440 | 41,027 | 69,169 | 68,227 |
| Soybean Oil | 23,118 | 17,012 | 18,971 | 33,614 | 20,881 |
| Cottonseed Oil | 10,394 | 10,191 | 8,402 | 11,333 | 11,289 |
| Corn Oil | 8,019 | 8,179 | 6,604 | 10,358 | 10,172 |
| Peanut Oil | 5,334 | 7,399 | 7,382 | 5,519 | 6,848 |
| Coconut Oil | 20,645 | 32,295 | 21,299 | 21,956 | 25,816 |
| Palm Oil | 12,863 | 30,861 | 19,580 | 16,199 | 41,283 |
| Palm Kernel Oil | 4,903 | 5,749 | 5,944 | 4,376 | 5,093 |
| Olive Oil | 2,174 | 2,903 | 2,088 | 2,408 | 1,987 |
| Cocoa Butter | 6,616 | 6,300 | 6,595 | 5,378 | 4,362 |
| Sunflowerseed Oil | 2,349 | 1,926 | 77 | 186 | 170 |
| Veg. Oils & Fats | 1,231 | 1,764 | 4,504 | 5,973 | 2,965 |
| Veg. Cooking Fats & Packaged Salad Oils | 381 | 545 | 1,031 | 1,461 | 693 |
| Margarine & Shortening Oils | 2,781 | 5,133 | 1,448 | 11,983 | 15,546 |
| Total[1] | 175,972 | 184,702 | 144,956 | 199,918 | 215,332 |
| **Animal Fats** | | | | | |
| Lard | 6,085 | 9,783 | 7,160 | 17,680 | 12,118 |
| Butter[2] | 1,133 | 3,247 | 23,013 | 19,754 | 4,565 |
| Total | 7,218 | 13,031 | 30,173 | 37,435 | 16,683 |
| **Marine Oils** | | | | | |
| Fish & Marine Oil | 1,560 | 1,651 | 1,239 | 849 | 879 |
| Total | 1,560 | 1,651 | 1,239 | 849 | 879 |
| TOTAL EDIBLE OILS & FATS | 184,750 | 199,385 | 176,369 | 238,202 | 232,894 |
| **PRIMARILY INEDIBLE** | | | | | |
| Castor Oil | 2,621 | 2,170 | 2,788 | 1,850 | 1,909 |
| Tung Oil | 883 | 1,024 | 1,242 | 425 | 692 |
| Inedible Tallow[3] | 9,535 | 8,406 | 2,779 | 3,509 | 1,668 |
| Animal Oil & Fats | 351 | 1,148 | 475 | 808 | 487 |
| Animal Grease[4] | 1,432 | 1,148 | 2,517 | 2,612 | 4,154 |
| TOTAL INEDIBLE OILS & FATS | 14,822 | 13,897 | 9,802 | 9,205 | 8,910 |
| TOTAL EDIBLE & INEDIBLE FATS & OILS IMPORTS | 214,394 | 213,283 | 186,172 | 247,408 | 241,804 |

TABLE 6 (Cont'd)

1/ Vegetable oil total includes the oil equivalent of the imported soybeans. This is justified because the soybeans are crushed in Canada for oil and meal production.

2/ Butter imports have been converted to oil equivalent, using the factor of 81%.

3/ This class includes both edible and inedible tallow. The proportions are not known.

4/ This category includes Animal Grease, N.E.S. and Wool Grease and Lanolin.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 7

CANADIAN EXPORTS OF FATS AND OILS

(Metric Tons)

| | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| **PRIMARILY EDIBLE** | | | | | |
| **Vegetable Oils** | | | | | |
| Soybeans (Oil Equiv.) | 6,024 | 7,334 | 4,771 | 5,034 | 1,541 |
| Soybean Oil | 44,229 | 31,305 | 3,360 | 8,148 | 2,074 |
| Rapeseed (Oil Equiv.) | 460,433 | 430,917 | 477,474 | 246,394 | 270,479 |
| Rapeseed Oil | - | - | 34,805 | 27,669 | 19,811 |
| Sunflowerseed (Oil Equiv.) | 4,610 | 9,707 | 12,459 | 8,467 | 3,186 |
| Margarine & Shortening | 371 | 236 | 147 | 352 | 268 |
| Vegetable Oil & Fats | 5,199 | 9,104 | 13,252 | 763 | 944 |
| Total[1] | 520,868 | 488,604 | 546,269 | 296,828 | 298,303 |
| **Animal Fats** | | | | | |
| Butter (Oil Equiv.)[2] | 1,646 | 8 | 2 | 3 | 23 |
| Total | 1,646 | 8 | 2 | 3 | 23 |
| **Marine Oils** | | | | | |
| Herring Oil | 5,254 | 3,422 | 2,833 | 5,524 | 2,277 |
| Whale Oil | 2,894 | 2,197 | 1,259 | - | - |
| Total | 8,148 | 5,620 | 4,093 | 5,524 | 2,277 |
| **TOTAL EDIBLE FATS & OILS (Including Oil Equiv. of Oilseeds)** | 530,663 | 494,293 | 550,362 | 302,356 | 300,603 |
| **PRIMARILY INEDIBLE** | | | | | |
| Flaxseed (Oil Equiv.) | 221,628 | 210,469 | 153,355 | 124,267 | 86,709 |
| Linseed Oil | 11,008 | 16,123 | 6,080 | 592 | 3,562 |
| Inedible Tallow[3] | 99,295 | 104,130 | 81,926 | 98,740 | 97,871 |
| Marine Oils[4] | 2,989 | 1,672 | 2,683 | 2,338 | 2,615 |
| Animal Fats and Oils | 4,343 | 3,293 | 5,116 | 2,718 | 1,463 |
| **TOTAL INEDIBLE FATS & OILS** | 339,274 | 335,688 | 249,162 | 228,656 | 192,210 |
| **TOTAL EDIBLE & INEDIBLE FATS AND OILS** | 869,947 | 829,921 | 799,525 | 531,012 | 492,823 |

TABLE 7 (Cont'd)

1/ The margarine portion cannot be separated, consequently it was not converted to fat equivalent. Oil equivalent of oilseeds are included in all totals. It is justified to include the oil equivalents of exported oilseeds into the total of fats and oil exports, since it represents a form of oil export and does not involve a duplication of data. Starting in 1973 rapeseed oil exports are reported separately and are no longer included under "Vegetable Oils and Fats".

2/ Butter exports have been converted to oil equivalent, using the factor of 81%.

3/ This class includes both edible and inedible tallow. The proportions are not known.

4/ Marine oil exports listed under "Inedible Oils" include sun-rotted cod liver oil, a non-specified group of fish and marine oil, and fish liver and visceral oils. While most of these oils can be assumed to be of an inedible grade, a small quantity of edible oil may have been included.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 8

CANADIAN OILSEEDS: ACREAGE, YIELD, PRODUCTION

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (Thousands of Acres) | | | | | (Yield Per Acre, Bushels) | | | | |
| Flaxseed | 1,768 | 1,321 | 1,450 | 1,450 | 1,400 | 12.7 | 13.3 | 13.4 | 9.5 | 12.5 |
| Rapeseed | 5,306 | 3,270 | 3,150 | 3,160 | 4,020 | 17.9 | 17.5 | 16.9 | 16.2 | 17.9 |
| Soybeans | 367 | 405 | 470 | 415 | 390 | 28.0 | 34.0 | 31.0 | 24.8 | 34.6 |
| Mustardseed | 206 | 180 | 335 | 350 | 163 | 900 | 842 | 782 | 743 | 678 |
| Sunflowerseed | 239 | 217 | 129 | 21 | 62 | 706 | 783 | 705 | 867 | 1,065 |

| | Production | | | | | Oil Equivalent | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (Thousands of Bushels) | | | | | (Metric Tons) | | | | |
| Flaxseed | 22,321 | 17,617 | 19,400 | 13,800 | 17,500 | 200,489 | 158,759 | 174,634 | 124,091 | 157,361 |
| Rapeseed | 95,000 | 57,300 | 53,200 | 51,300 | 72,100 | 861,834 | 520,275 | 482,627 | 465,390 | 654,097 |
| Soybeans | 10,276 | 13,770 | 14,570 | 10,290 | 13,478 | 49,442 | 66,225 | 70,307 | 49,569 | 64,926 |
| | (Metric Tons) | | | | | (Metric Tons) | | | | |
| Mustardseed | 84,187 | 68,720 | 118,842 | 117,935 | 50,122 | - | - | - | - | - |
| Sunflowerseed | 76,689 | 77,111 | 41,232 | 8,255 | 29,937 | 30,844 | 30,844 | 16,329 | 3,302 | 11,975 |

Oil Conversion Factors:
Flaxseed ..... 35.4%
Rapeseed ..... 40.0%
Soybeans ..... 17.7%
Sunflowerseed ..... 40.0%
Mustardseed ..... Oil Content Varies with Variety.

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 9

CANADIAN OILSEED PRODUCTION BY PROVINCE

| | AREA 1/ | | | YIELD PER ACRE | | | PRODUCTION | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1973 | 1974 | 1975 | 1973 | 1974 | 1975 | 1973 | 1974 | 1975 |
| FLAXSEED | | | | (Bushels) | | | (Thousands of Bushels) | | |
| Ontario | - | - | - | - | - | - | - | - | - |
| Manitoba | 600 | 700 | 750 | 12.7 | 9.4 | 11.2 | 7,600 | 6,600 | 8,400 |
| Saskatchewan | 650 | 550 | 450 | 13.7 | 8.5 | 13.1 | 8,900 | 4,700 | 5,900 |
| Alberta | 200 | 200 | 200 | 14.5 | 12.5 | 16.0 | 2,900 | 2,500 | 3,200 |
| RAPESEED | | | | (Bushels) | | | (Thousands of Bushels) | | |
| Manitoba | 400 | 500 | 650 | 19.2 | 17.0 | 16.9 | 7,700 | 8,500 | 11,000 |
| Saskatchewan | 1,450 | 1,450 | 1,800 | 16.6 | 16.0 | 18.3 | 24,000 | 23,200 | 33,000 |
| Alberta | 1,300 | 1,150 | 1,500 | 16.5 | 16.3 | 18.0 | 21,500 | 18,700 | 27,000 |
| British Columbia | - | 60 | 70 | - | 15.0 | 15.7 | - | 900 | 1,100 |
| SOYBEANS | | | | (Bushels) | | | (Thousands of Bushels) | | |
| Ontario | 470 | 415 | 390 | 31.0 | 24.8 | 34.6 | 14,500 | 10,290 | 13,478 |
| SUNFLOWERSEED | | | | (Pounds) | | | (Metric Tons) | | |
| Manitoba | 125 | 21 | 62 | 700 | 867 | 1,065 | 39,689 | 8,255 | 29,937 |
| Saskatchewan | 2.5 | - | - | 800 | - | - | 907 | - | - |
| Alberta | 1.5 | - | - | 933 | - | - | 635 | - | - |
| MUSTARD SEED | | | | (Pounds) | | | (Metric Tons) | | |
| Manitoba | 40 | 40 | 23 | 800 | 750 | 630 | 14,515 | 13,608 | 6,577 |
| Saskatchewan | 225 | 200 | 76 | 800 | 750 | 658 | 81,647 | 68,039 | 22,679 |
| Alberta | 70 | 110 | 64 | 714 | 727 | 719 | 22,679 | 36,287 | 20,865 |

1/ Thousands of acres.

SOURCE: Statistics Canada, Catalogue No. 22-002.

TABLE 10

CANADIAN CRUSHINGS OF VEGETABLE OILSEEDS AND PRODUCTION OF OIL AND MEAL BY CROP YEAR

(Metric Tons)

| CRUSHINGS | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| Flaxseed | 71,124 | 78,744 | 66,890 | 19,346 | x[1/] |
| Rapeseed | 195,046 | 272,158 | 353,178 | 334,414 | 275,973 |
| Soybeans | 636,850 | 634,128 | 612,552 | 642,310 | 635,110 |
| Sunflowerseed | 14,968 | 31,298 | 31,717 | 28,212 | 7,134 |
| Total | 917,988 | 1,016,328 | 1,064,337 | 1,024,282 | - |
| OIL PRODUCTION | | | | | |
| Flaxseed | 24,947 | 26,762 | 22,762 | 6,601 | x[1/] |
| Rapeseed | 77,111 | 106,141 | 133,966 | 125,631 | 108,483 |
| Soybeans | 109,770 | 109,316 | 99,125 | 109,169 | 108,344 |
| Sunflowerseed | 5,715 | 13,154 | 13,009 | 11,234 | 2,671 |
| Total | 217,545 | 255,375 | 268,862 | 252,635 | - |
| MEAL PRODUCTION | | | | | |
| Flaxseed | 45,359 | 49,895 | 42,037 | 11,932 | x[1/] |
| Rapeseed | 112,945 | 162,841 | 204,169 | 193,932 | 157,763 |
| Soybeans | 498,049 | 493,967 | 482,973 | 503,368 | 499,183 |
| Sunflowerseed | 5,443 | 11,793 | 11,811 | 10,558 | 2,553 |
| Total | 661,798 | 718,497 | 740,990 | 719,790 | - |

1/ Confidential - to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 22-006

TABLE 11

MONTH-END STOCKS OF OIL AND MEAL IN CRUSHING PLANTS[1/]

(Metric Tons)

| | OIL | | | MEAL | | |
|---|---|---|---|---|---|---|
| | 1973 | 1974 | 1975 | 1973 | 1974 | 1975 |
| Flaxseed | 1,847 | x[2/] | x[2/] | 1,145 | x[2/] | x[2/] |
| Soybeans | 2,894 | 3,750 | 1,399 | 18,049 | 14,614 | 6,129 |
| Rapeseed | 6,199 | 10,480 | 7,640 | 11,128 | 5,983 | 3,966 |
| Sunflowerseed | 43 | 68 | 11 | 69 | 98 | 98 |

1/ October 1973-75.

2/ Confidential to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 22-006

# CHAPTER 4

## THE CANADIAN RAPESEED SITUATION

### Production

After reaching a peak production of 95 million bushels in 1971/72, rapeseed production has steadily declined as a result of the increased competition for acreage from cereal grains and reduced domestic and world demand for rapeseed and its products in response to increased competition from lower-priced vegetable oils and meals (Table 12).

If world production of edible vegetable oils and proteins continue to increase and world markets for cereal grains continue to remain strong, rapeseed will face increasing competition for acreage. Future increases in production will therefore be more likely to be derived from increased yields rather than from increased acreage.

### Canadian Exports of Rapeseed

Rapeseed exports increased in 1975 over 1974, but it must be remembered that strikes in the grain industry substantially reduced exports in 1974 (Table 14). Exports in 1975 were only 60% of the average exports for the three-year period 1971 to 1973. While Japan has continued to be our largest export market, exports to this market were reduced in 1974 and 1975 by the importation of lower-priced rapeseed from other sources.

### Canadian Exports of Rapeseed Oil

Prior to 1973 exports of rapeseed oil were not reported separately by Statistics Canada; therefore, it is difficult to establish a trend (Table 15). Exports have declined from 1973 to 1975 due to a number of factors including worldwide recession which reduced the demand for edible oils. High prices, world production exceeding demand and the entry of low-priced palm, palm kernel and coconut oils on the world market in large volumes are also considered to have been factors in the reduction of Canadian rapeseed oil exports.

## Canadian Exports of Rapeseed Oilcake and Meal

Exports of rapeseed meal were not reported separately prior to 1973 but since then the trend has been downward (Table 16). The U.S. export embargo on protein meals which was imposed in 1973 caused importers to seek protein supplies from alternative sources, so that a comparison of 1974 and 1975 exports with 1973 is not necessarily valid.

## Canadian Rapeseed Prices

Rapeseed prices remained relatively stable from 1970/71 through June 1973 at which time they began to rise dramatically to a peak of $9.55 per bushel in October 1974 (Table 18). Since that time prices have fluctuated.

TABLE 12

CANADIAN SUPPLY AND DISPOSITION OF RAPESEED
RAPESEED OIL AND RAPESEED MEAL
(Crop Year)

| RAPESEED | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | | | (Thousands of Bushels) | | |
| Stocks, Starting | 3,683 | 11,029 | 43,139 | 20,678 | 12,386 |
| Production | 72,200 | 95,000 | 57,300 | 53,200 | 51,300 |
| Exports | 46,811 | 42,603 | 54,059 | 39,183 | 26,146 |
| Domestic Crushings | 8,575 | 12,050 | 15,572 | 14,745 | 12,168 |
| RAPESEED OIL | | | (Metric Tons) | | |
| Exports | - | - | 24,983 | 34,488 | 19,240 |
| Domestic Production | 77,111 | 106,141 | 133,966 | 125,631 | 108,483 |
| RAPESEED MEAL | | | (Metric Tons) | | |
| Exports | - | - | 19,452 | 47,580 | 10,672 |
| Domestic Production | 112,945 | 162,841 | 204,169 | 193,932 | 157,763 |

SOURCE: Statistics Canada, Catalogue No. 22-006.

TABLE 13

SUMMERFALLOW AND STUBBLE CULTIVATION
RAPESEED AND FLAXSEED

| | RAPESEED | | | FLAXSEED | | |
|---|---|---|---|---|---|---|
| | Summer-fallow | Stubble | Total | Summer-fallow | Stubble | Total |
| Seeded Area | | | ('000 Acres) | | | |
| 1971 | 4,759 | 716 | 5,475 | 1,442 | 558 | 2,000 |
| 1972 | 2,525 | 745 | 3,270 | 746 | 574 | 1,320 |
| 1973 | 2,410 | 740 | 3,150 | 776 | 674 | 1,450 |
| 1974 | 2,346 | 754 | 3,100 | 731 | 719 | 1,450 |
| 1975 | 3,009 | 941 | 3,950 | 664 | 736 | 1,400 |
| Distribution | | | (Per Cent) | | | |
| 1971 | 87 | 13 | 100 | 72 | 28 | 100 |
| 1972 | 77 | 23 | 100 | 57 | 43 | 100 |
| 1973 | 77 | 23 | 100 | 54 | 46 | 100 |
| 1974 | 76 | 24 | 100 | 50 | 50 | 100 |
| 1975 | 76 | 24 | 100 | 47 | 53 | 100 |
| Average Yield Per Seeded Acre | | | (Bushels) | | | |
| 1971 | 18.7 | 13.1 | 18.0 | 13.9 | 9.9 | 12.8 |
| 1972 | 18.3 | 14.8 | 17.5 | 15.2 | 11.0 | 13.3 |
| 1973 | 17.9 | 13.5 | 16.9 | 14.6 | 12.0 | 13.4 |
| 1974 | 17.2 | 13.4 | 16.3 | 10.5 | 8.5 | 9.5 |
| 1975 | 19.0 | 14.7 | 18.0 | 14.5 | 10.7 | 12.5 |
| Production | | | (Million Bushels) | | | |
| 1971 | 89.12 | 9.38 | 98.50 | 20.0 | 5.5 | 25.5 |
| 1972 | 46.27 | 11.03 | 57.30 | 11.3 | 6.3 | 17.6 |
| 1973 | 43.22 | 9.98 | 53.20 | 11.3 | 8.1 | 19.4 |
| 1974 | 40.30 | 10.10 | 50.40 | 7.7 | 6.1 | 13.8 |
| 1975 | 57.20 | 13.80 | 71.00 | 9.6 | 7.9 | 17.5 |

SOURCE: Statistics Canada, Catalogue No. 22-002.

TABLE 14

CANADIAN EXPORTS OF RAPESEED

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Algeria | - | 1,950 | - | - | - |
| Australia | 44 | 10,995 | 20,613 | 14,739 | - |
| Bangladesh | - | - | 81,048 2/ | 18,012 3/ | 47,688 4/ |
| Belgium-Luxembourg | 3,705 | 1,516 | 2,092 | 358 | 508 |
| Brazil | - | - | - | 12 | - |
| Czechoslovakia | 12,999 | - | - | - | - |
| Denmark | - | - | 4,536 | - | - |
| Finland | 1,813 | - | - | - | - |
| France | 164,569 | 143,369 | 17,118 | - | - |
| Germany, West | 92,151 | 28,075 | 87,970 | 23,418 | 5,651 |
| Hungary | - | 1/ | - | - | - |
| India | 80,283 | 51,242 | 51,302 5/ | 4,521 6/ | 14,142 7/ |
| Italy | 91,584 | 67,997 | 86,121 | 896 | 2,008 |
| Japan | 426,304 | 588,648 | 710,987 | 493,947 | 579,385 |
| Korea, South | 2,072 | - | 24,474 | - | - |
| Lebanon | 1,049 | 3,789 | - | - | - |
| Mexico | - | 4 | 23,502 | 38,731 | - |
| Morocco | 11,549 | 15,201 | - | - | - |
| Netherlands | 203,679 | 86,058 | 61,895 | 20,680 | 18,426 |
| Norway | 10,826 | 3,242 | - | - | - |
| Pakistan | 21,223 | 52,051 | - | - | - |
| Peru | 1 | - | - | 2 | - |
| Romania | - | - | - | 1 | - |
| Spain | 45 | 61 | 1,004 | - | 919 |
| Sweden | 3 | 20 | 13 | 1/ | 56 |
| Switzerland | - | - | - | - | 3,953 |
| Taiwan | - | - | 18,024 | - | - |
| United Kingdom | 8,178 | 18,562 | 3,048 | 999 | 3,324 |
| United States | 8,258 | 191 | 2 | 104 | 123 |
| Venezuela | - | - | - | - | 9 |
| Total | 1,151,065 | 1,077,791 | 1,193,666 | 615,975 | 676,199 |

1/ Less than one metric ton.
2/ CIDA reports 27,140 metric tons shipped under bilateral food aid in the crop year 1972/73.
3/ CIDA reports 30,162 metric tons shipped under bilateral food aid in the crop year 1973/74.
4/ CIDA reports 9,432 metric tons shipped under bilateral food aid in the crop year 1974/75.
5/ CIDA reports 51,302 metric tons shipped under bilateral food aid in the crop year 1972/73.
6/ CIDA reports 4,521 metric tons shipped under bilateral food aid in the crop year 1973/74.
7/ CIDA reports 14,150 metric tons shipped under bilateral food aid in the crop year 1974/75.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 15

CANADIAN EXPORTS OF RAPESEED OIL

(Metric Tons)

| DESTINATION | 1971 1/ | 1972 1/ | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | | | 395 2/ | 538 | 122 |
| Bangladesh | | | 295 | - | - |
| Chile | | | 11,159 | - | - |
| France | | | 1 | - | - |
| Hong Kong | | | 2,304 | - | 590 4/ |
| India | | | 5,050 | 13,237 3/ | 9,438 |
| Japan | | | 13,695 | 3,381 | 3,019 |
| Netherlands | | | 13 | - | 3,202 |
| United Kingdom | | | 1,176 | 1,240 | 2,476 |
| United States | | | 711 | 8,268 | 963 |
| Zambia | | | - | 1,002 | - |
| Total | | | 34,805 | 27,669 | 19,811 |
| Total Value ($'000) | | | 10,223 | 14,133 | 15,683 |

1/ Not published prior to 1973.

2/ CIDA reports 4,493 metric tons shipped under bilateral food aid in the crop year 1972/73.

3/ CIDA reports 13,694 metric tons shipped under bilateral food aid in the crop year 1973/74.

4/ CIDA reports 7,364 metric tons shipped under bilateral food aid in the crop year 1974/75.

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 16

CANADIAN EXPORTS OF RAPESEED OILCAKE AND MEAL

(Metric Tons)

| DESTINATION | 1971 1/ | 1972 1/ | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Barbados | | | 9 | 269 | - |
| Chile | | | 5,499 | - | - |
| Cuba | | | 20 | - | - |
| Germany, West | | | 1,451 | 16 | 1,965 |
| Jamaica | | | - | 3 | - |
| Japan | | | 1 | - | - |
| Korea, South | | | 7,597 | - | - |
| Mexico | | | 3,039 | 5,811 | - |
| Netherlands | | | 6,702 | 10,738 | 5,756 |
| Philippines | | | 3,710 | 609 | - |
| United Kingdom | | | 11,616 | 7,620 | 12,392 |
| United States | | | 1,608 | 5,840 | 552 |
| Total | | | 41,257 | 30,911 | 20,666 |
| Total Value ($'000) | | | 6,198 | 3,218 | 2,115 |

1/ Not published prior to 1973.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 17

QUALITY DATA FOR WESTERN CANADIAN RAPESEED,
SURVEY SAMPLES OF 1974 AND 1975 CROPS

| | 1974 SURVEY | | | | 1975 SURVEY | | | |
|---|---|---|---|---|---|---|---|---|
| | Oil 1/ Content | Erucic Acid Content | Protein 2/ Content | No. of Samples | Oil 1/ Content | Erucic Acid Content | Protein 2/ Content | No. of Samples |
| WESTERN CANADA | | | | | | | | |
| No. 1 CRS | 40.5 | 4.5 | 35.7 | 387 | 41.3 | 3.2 | 36.6 | 445 |
| No. 2 CRS | 43.0 | 2.8 | 36.6 | 74 | 40.6 | 1.6 | 40.4 | 46 |
| No. 3 CRS | 42.7 | 6.8 | 34.7 | 14 | 41.4 | 0.4 | 42.8 | 2 |
| All Grades | 40.8 | 4.3 | 35.6 | 486 | 41.3 | 3.1 | 36.9 | 493 |
| ALL GRADES BY PROVINCE | | | | | | | | |
| Manitoba | 40.8 | 3.2 | 36.8 | 78 | 39.7 | 1.6 | 39.9 | 80 |
| Saskatchewan | 40.8 | 3.2 | 36.4 | 327 | 41.6 | 2.5 | 36.9 | 229 |
| Alberta | 40.9 | 5.6 | 34.1 | 171 | 41.5 | 4.4 | 35.7 | 184 |

1/ Oil content of seed is reported on an 8.5% moisture basis.

2/ Protein content is reported on the oil-free meal and an 8.5% moisture basis.

SOURCE: Canadian Grain Commission, Crop Bulletins No. 125 and 129.

TABLE 18

CANADIAN RAPESEED PRICES

(Crop Year)

| MONTH | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | (Cents and Eighths per Bushel) | | | | |
| August | 267/3 | 273/7 | 244/7 | 649/7 | 821/2 |
| September | 240/6 | 248/2 | 253/3 | 536/4 | 851/4 |
| October | 255/7 | 255/4 | 256/1 | 493/7 | 955/5 |
| November | 259 | 250/2 | 260/5 | 482/5 | 902 |
| December | 269/2 | 238/3 | 295/5 | 566/6 | 812/3 |
| January | 281/3 | 228 | 325/6 | 655/1 | 731/7 |
| February | 302 | 231/4 | 374/4 | 706/1 | 639/3 |
| March | 291/4 | 247/2 | 361 | 677/7 | 620/2 |
| April | 302/3 | 269/5 | 376/2 | 608/7 | 643/3 |
| May | 274 | 248 | 399/1 | 702/1 | 568/5 |
| June | 290/4 | 234/7 | 537/7 | 738/6 | 545/3 |
| July | 296/7 | 239/3 | 682/4 | 796 | 587/4 |
| Yearly Average | 278/1 | 247/1 | 364 | 634/4 | 723/2 |

SOURCE: Statistics Canada, Catalogue No. 22-006

# CHAPTER 5

# THE CANADIAN SOYBEAN SITUATION

## Production

Soybean production in Canada is confined mainly to southwestern Ontario where competition for acreage with other cash crops is intense. Production dropped in 1974/75 by 3.5 million bushels compared to 1973/74 due to an expansion of corn production in the soybean producing areas (Table 19). Until new varieties are developed which, by requiring fewer heat units for maturity, will increase the area of potential soybean production in Canada, it appears unlikely that soybean production will significantly exceed 14 million bushels.

Domestic crushings have remained relatively stable over the last five years.

## Canadian Imports of Soybean and Soybean Oil

Canadian imports of soybeans, almost all from the United States, have typically been equivalent to about two-thirds of domestic production (Table 20).

Imports of soybean oil were 12.7 metric tons lower in 1975 than in 1974 probably due to the increase in the importation of palm oil.

## Imports of Soybean Meal

Soybean meal continues to be the dominant oilseed protein meal for livestock and poultry feeding in Canada. Domestic production has remained relatively stable at around 500,000 metric tons per year and additional quantities are imported from the U.S. to supplement Canadian production (Table 21). The amount imported varies according to Canadian production and the level of livestock and poultry feeding in Canada.

## Canadian Exports of Soybeans

The United Kingdom has been Canada's major soybean market over the years. However, British entry into the E.E.C. has resulted in loss of the Commonwealth preferential tariff so that Canadian exports have dropped significantly in the last two years (Table 23).

Exports are now mainly comprised of specialty (food grade) items for direct human consumption.

## Canadian Exports of Soybean Oil and Meal

The U.K. has been Canada's principal market for soybean oil and meal (Table 24). Exports are expected to continue their downward trend due to the loss of the preferential tariff in this market.

## Canadian Soybean Prices

Canadian prices of soybeans are closely tied to the Chicago commodity market (Table 25).

TABLE 19

CANADIAN SUPPLY AND DISPOSITION OF SOYBEANS, SOYBEAN OIL AND SOYBEAN MEAL

(Crop Year)

| SOYBEANS | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | | | (Thousands of Bushels) | | |
| Production | 10,385 | 10,276 | 13,770 | 14,570 | 11,040 |
| Imports | 15,703 | 14,774 | 10,973 | 12,506 | 12,650 |
| Exports | 768 | 1,366 | 1,062 | 1,061 | 349 |
| Domestic Crushings | 23,437 | 23,314 | 22,507 | 23,601 | 23,336 |
| SOYBEAN OIL | | | (Metric Tons) | | |
| Imports | 24,041 | 19,519 | 16,459 | 33,395 | 19,557 |
| Exports | 30,880 | 46,128 | 12,547 | 4,942 | 5,587 |
| Domestic Production | 109,770 | 109,316 | 99,125 | 109,169 | 108,344 |
| SOYBEAN MEAL | | | (Metric Tons) | | |
| Imports | 226,685 | 207,649 | 219,872 | 232,974 | 135,574 |
| Exports | 119,779 | 123,208 | 118,066 | 94,087 | 83,527 |
| Domestic Production | 498,049 | 493,967 | 482,973 | 503,368 | 499,183 |

SOURCE: Statistics Canada, Catalogue No. 22-006.

TABLE 20

CANADIAN IMPORTS OF SOYBEAN AND SOYBEAN OIL

SOYBEANS

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Germany, West | - | - | - | 2 | 1 |
| Hong Kong | 26 | 4 | 12 | 1/ | 3 |
| Japan | - | - | 2 | 2 | 4 |
| Peoples Republic of China | 30 | 5 | 20 | 20 | 13 |
| United Kingdom | - | - | 1/ | - | - |
| United States | 424,593 | 308,470 | 231,749 | 390,756 | 385,444 |
| Total | 424,650 | 340,043 | 231,784 | 390,781 | 385,465 |
| Total Value ($'000) | 49,639 | 39,108 | 50,360 | 90,505 | 86,210 |

SOYBEAN OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| France | - | 1/ | - | 1/ | 1 |
| United States | 23,118 | 17,012 | 18,971 | 33,614 | 20,881 |
| Total | 23,118 | 17,012 | 18,971 | 33,614 | 20,882 |
| Total Value ($'000) | 7,217 | 4,708 | 8,264 | 24,829 | 14,394 |

SOURCE: Statistics Canada, Catalogue No. 65-007

1/ Less than one metric ton.

TABLE 21

IMPORTS OF SOYBEAN OIL BY PROVINCE

| | 1971 | | 1972 | | 1973 | | 1974 | | 1975 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ |
| Newfoundland | - | - | - | - | - | - | - | - | - | - |
| Nova Scotia | - | - | - | - | 39 | 17 | - | - | 1 | 1/ |
| P.E.I. | 137 | 47 | - | - | - | - | - | - | - | - |
| New Brunswick | 4,712 | 1,411 | 2,314 | 674 | 948 | 393 | 1,366 | 1,033 | 1,614 | 1,267 |
| Quebec | 763 | 226 | 149 | 50 | 873 | 446 | 5,897 | 3,871 | 1,490 | 822 |
| Ontario | 15,451 | 4,850 | 12,062 | 3,254 | 11,775 | 5,114 | 16,913 | 13,143 | 11,681 | 8,196 |
| Manitoba | 55 | 16 | 69 | 14 | 2,338 | 993 | 4,458 | 3,184 | 2,752 | 1,572 |
| Saskatchewan | - | - | - | - | - | - | 95 | 73 | 250 | 155 |
| Alberta | - | - | - | - | 162 | 72 | 970 | 599 | 343 | 236 |
| British Columbia | 1,996 | 663 | 2,415 | 714 | 2,830 | 1,225 | 3,912 | 2,922 | 2,747 | 2,142 |
| Total | 23,116 | 7,213 | 17,011 | 4,706 | 18,969 | 8,260 | 33,613 | 24,825 | 20,881 | 14,394 |

1/ Less than $1,000.

SOURCE: Statistics Canada, Unpublished Data.

TABLE 22

IMPORTS OF SOYBEAN MEAL BY PROVINCE

| | 1971 | | 1972 | | 1973 | | 1974 | | 1975 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ |
| Newfoundland | - | - | - | - | - | - | - | - | 129 | 18 |
| Nova Scotia | 3,092 | 315 | 1,536 | 185 | 3,084 | 477 | 133 | 29 | 3,288 | 521 |
| P.E.I. | - | - | - | - | - | - | - | - | - | - |
| New Brunswick | - | - | - | - | 36 | 4 | 72 | 13 | 129 | 18 |
| Quebec | 44,864 | 5,486 | 50,512 | 6,232 | 36,719 | 5,312 | 65,673 | 10,399 | 91,146 | 20,062 |
| Ontario | 57,095 | 5,797 | 54,839 | 7,247 | 47,879 | 14,048 | 57,704 | 10,897 | 49,312 | 8,574 |
| Manitoba | 40,071 | 3,804 | 47,689 | 5,188 | 46,432 | 11,245 | 77,965 | 14,627 | 63,070 | 9,975 |
| Saskatchewan | 6,550 | 597 | 6,029 | 662 | 16,335 | 4,383 | 19,672 | 3,975 | 17,808 | 3,134 |
| Alberta | 23,320 | 2,237 | 28,414 | 3,067 | 21,794 | 5,644 | 27,025 | 5,108 | 37,904 | 6,273 |
| B.C. | 32,785 | 3,099 | 33,122 | 3,743 | 19,060 | 5,016 | 29,192 | 5,865 | 31,554 | 5,622 |
| Total | 207,780 | 21,335 | 222,143 | 26,254 | 191,341 | 46,129 | 277,438 | 50,853 | 294,343 | 54,209 |

SOURCE: Statistics Canada, Unpublished Data

TABLE 23

CANADIAN EXPORTS OF SOYBEANS

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Belgium-Luxembourg | - | - | - | 2,000 | - |
| Bulgaria | - | - | 137 | - | - |
| France | - | - | - | 63 | 490 |
| Germany, West | 13 | - | 1 | 561 | 225 |
| Hong Kong | - | - | 18 | 957 | 2,192 |
| Jamaica | 2 | 2 | 2 | 3 | 4 |
| Japan | - | - | 5,103 | 3,830 | 3,041 |
| Netherlands | 97 | 162 | 145 | 18 | - |
| Singapore | - | - | - | - | 1,020 |
| Spain | - | - | - | - | 213 |
| Surinam | 1 | - | - | - | - |
| Sweden | 850 | 676 | 839 | 1,356 | - |
| Switzerland | 30 | 72 | 72 | 91 | - |
| Trinidad - Tobago | 1 | - | - | - | - |
| United Kingdom | 33,019 | 40,532 | 20,358 | 4,162 | 30 |
| United States | 16 | 24 | 274 | 22 | 46 |
| U.S.S.R. | - | 5 | - | - | - |
| Yugoslavia | - | - | - | - | 160 |
| Total | 34,033 | 41,478 | 26,955 | 13,066 | 8,710 |
| Total Value ($'000) | 4,063 | 5,665 | 6,151 | 3,451 | 2,812 |

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 24

CANADIAN EXPORTS OF SOYBEAN OIL AND MEAL

(Metric Tons)

SOYBEAN OIL

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Bahamas | 2 | 8 | 4 | - | - |
| Germany, West | - | - | - | - | 14 |
| Jamaica | - | - | - | - | 4 |
| Leeward-Windward Islands | - | - | - | 1 | 1 |
| United Kingdom | 44,219 | 31,296 | 3,310 | 7,778 | 1,965 |
| United States | 6 | 1/ | 45 | 368 | 92 |
| Total | 44,228 | 31,304 | 3,359 | 8,148 | 2,076 |
| Total Value ($'000) | 14,491 | 8,480 | 1,233 | 5,663 | 1,391 |

1/ Less than one metric ton.

SOYBEAN MEAL

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Belgium-Luxembourg | - | - | 6,679 | - | - |
| Guyana | - | 6 | - | - | - |
| Ireland | - | - | - | 3,789 | - |
| Trinidad-Tobago | - | - | - | - | 1 |
| United Kingdom | 120,194 | 86,675 | 94,906 | 101,984 | 57,269 |
| United States | 4 | 1,872 | 9,923 | 9,420 | 1,723 |
| Total | 120,198 | 88,554 | 111,509 | 115,195 | 58,993 |
| Total Value ($'000) | 11,351 | 9,405 | 18,851 | 17,547 | 9,435 |

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 25

CANADIAN SOYBEAN PRICES [1/]

(Crop Year)

| MONTH | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | ..... (Cents and Eighths per Bushel) ..... | | | | |
| August | 276/3 | 326/1 | 340/7 | 1040 | 716/2 |
| September | 277/6 | 304/7 | 325/6 | 605 | 726/6 |
| October | 291/4 | 308/3 | 310/5 | 557 | 811/4 |
| November | 293/1 | 299/2 | 342/2 | 553/6 | 723/6 |
| December | 286 | 299/6 | 391/7 | 583/7 | 678/2 |
| January | 294/2 | 297/2 | 428 | 606/2 | 590/6 |
| February | 296/3 | 306/6 | 567/6 | 644/1 | 506/2 |
| March | 296/4 | 325/7 | 617/5 | 610/2 | 504/2 |
| April | 286 | 338/2 | 646/4 | 534/2 | 527/3 |
| May | 295/2 | 335/5 | 882/4 | 517/1 | 481/8 |
| June | 311/5 | 330/1 | 1095/7 | 504/6 | 488/2 |
| July | 331/4 | 334/3 | 929 | 642/1 | 542/7 |
| Yearly Average | 294/6 | 316/7 | 573/2 | 616/4 | 608/2 |

1/ Buying prices, carlots, f.o.b. Chatham, No. 2 and better.

SOURCE: Statistics Canada, Catalogue No. 22-006

# CHAPTER 6

## THE CANADIAN SUNFLOWERSEED SITUATION

### Production

Canadian sunflower production is concentrated primarily in Manitoba. Between 1971 and 1975 the average production in Canada was 45,124 metric tons, of which Manitoba production was 38,891 metric tons (Table 26). There is, however, substantial scope for increased production of sunflowers from the standpoint of both the area seeded and increased yields. From an agronomic point of view, western Canada, with the present varieties could accommodate 400,000 to 800,000 acres and still maintain an adequate rotation. Increased yields would have a major impact not only on the total production levels but also on the number of acres seeded in subsequent years. Average yields have varied from a low of 708 pounds per acre to 1,065 pounds per acre over the five-year period. The variability and uncertainty of yields has resulted in producers being apprehensive about the sunflower crop and therefore limiting the seeded area.

### Canadian Exports and Imports of Sunflowerseed and Oil

Exports of sunflowerseed have declined from a high of 24.2 metric tons in 1972 to 7.9 metric tons in 1975 (Table 27).

Imports of sunflowerseed oil have also declined from a high of 2,270 metric tons in 1971 to 170 metric tons in 1970 (Table 28).

TABLE 26

CANADIAN SUNFLOWERSEED: ACREAGE, YIELD AND PRODUCTION

(Crop Year)

| | 1971/72 | 1972/73 | 1973/74 | 1974/75 | 1975/76 |
|---|---|---|---|---|---|
| | | | (Thousands of Acres) | | |
| Manitoba | 140.0 | 190.0 | 125.0 | 30.0 | 62.0 |
| Saskatchewan | 65.0 | 23.0 | 2.5 | - | - |
| Alberta | 10.0 | 4.0 | 1.5 | - | - |
| Canada, Total | 215.0 | 217.0 | 129.0 | 30.0 | 62.0 |
| | | | (Yield Per Acre, Pounds) | | |
| Manitoba | 750 | 800 | 700 | 867 | 1,065 |
| Saskatchewan | 650 | 652 | 800 | - | - |
| Alberta | 500 | 750 | 933 | - | - |
| Canada, Total | 708 | 783 | 705 | 867 | 1,065 |
| | | | (Production - Metric Tons) | | |
| Manitoba | 47,627 | 68,946 | 39,689 | 8,255 | 29,937 |
| Saskatchewan | 19,187 | 6,804 | 907 | - | - |
| Alberta | 2,268 | 1,360 | 635 | - | - |
| Canada, Total | 69,082 | 77,111 | 41,232 | 8,255 | 29,937 |

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 27

CANADIAN EXPORTS OF SUNFLOWERSEED

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Austrialia | - | - | 1/ | - | - |
| Bangladesh | - | - | 1/ | 2 | - |
| Bermuda | 1/ | - | - | - | - |
| Czechoslovakia | - | - | - | 6,877 | - |
| France | - | 2,499 | 20,357 | - | - |
| Germany, West | 49 | 4,339 | 69 | 7,244 | 3,825 |
| Italy | - | - | 8,255 | - | - |
| Japan | 3,024 | 5,558 | - | - | - |
| Korea, South | - | - | 23 | - | - |
| Netherlands | 4,719 | 10,221 | 887 | 5,703 | - |
| New Zealand | 1/ | 2 | 2 | 1/ | 2 |
| Portugal | - | - | - | 36 | 2,701 |
| Spain | - | - | 161 | - | 526 |
| Sweden | - | 46 | 37 | 1/ | 2 |
| United Kingdom | 25 | 45 | 22 | 31 | 34 |
| United States | 3,706 | 1,526 | 1,326 | 1,250 | 874 |
| U.S.S.R. | - | - | - | 1/ | - |
| Total | 11,524 | 24,238 | 31,143 | 21,169 | 7,965 |
| Total Value ($'000) | 1,517 | 3,660 | 6,143 | 7,334 | 2,623 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004

## TABLE 28

## CANADIAN IMPORTS OF SUNFLOWERSEED OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Austria | 4 | 7 | 1 | 3 | 5 |
| Bulgaria | 69 | - | - | - | - |
| France | - | - | 1/ | 2 | 1 |
| Germany, West | 3 | 1/ | - | - | - |
| Netherlands | - | 219 | - | - | - |
| United States | 2,270 | 1,698 | 74 | 178 | 160 |
| U.S.S.R. | - | - | - | 1 | 4 |
| Total | 2,348 | 1,925 | 77 | 186 | 170 |
| Total Value ($'000) | 736 | 617 | 27 | 181 | 158 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 29

IMPORTS OF SUNFLOWERSEED OIL BY PROVINCE

| | 1971 | | 1972 | | 1973 | | 1974 | | 1975 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ | Metric Tons | '000 of $ |
| Newfoundland | - | - | - | - | - | - | - | - | - | - |
| Nova Scotia | - | - | - | - | - | - | - | - | - | - |
| P.E.I. | - | - | - | - | - | - | - | - | - | - |
| New Brunswick | - | - | - | - | - | - | - | - | - | - |
| Quebec | 74 | 33 | 5 | 3 | 2 | 1 | 7 | 4 | 8 | 9 |
| Ontario | 2,243 | 689 | 1,920 | 616 | 74 | 25 | 178 | 175 | 50 | 43 |
| Manitoba | - | - | - | - | - | - | - | - | - | - |
| Saskatchewan | - | - | - | - | - | - | - | - | - | - |
| Alberta | 26 | 9 | - | - | - | - | - | - | 111 | 105 |
| British Columbia | 3 | 3 | - | - | - | - | 1/ | 1/ | 1/ | 2/ |
| Total | 2,347 | 734 | 1,925 | 619 | 77 | 26 | 185 | 179 | 170 | 157 |

1/ Less than one metric ton.

2/ Less than $1,000.

SOURCE: Statistics Canada, Unpublished Data

# CHAPTER 7

## THE CANADIAN MUSTARDSEED SITUATION

### Production

Mustardseed production in 1975/76 decreased by 67,814 metric tons compared to 1974/75 due to a combination of lower yields per acre and less seeded acreage (Table 30). Production is not expected to increase in the 1976/77 crop year because returns per acre to the producers are expected to be lower than for cereal grains.

### Canadian Exports of Mustardseed

Mustardseed is grown under contract to companies who receive, clean and export the seed. Although Canada continues to be the world's largest exporter of mustardseed, exports have been in a steady decline since 1972 (Table 31). The United States continues to be the major market.

### Canadian Imports of Ground Mustard

Although Canada continues to be the world's largest exporter of mustardseed, very little is processed in Canada. Therefore, imports of processed mustard are necessary to meet domestic requirements. Imports have been increasing steadily since 1972 and have been mainly from the United Kingdom (Table 32).

TABLE 30

CANADIAN MUSTARDSEED: ACREAGE, YIELD AND PRODUCTION

(Crop Year)

| | 1971/72 | 1972/73 | 1973/74 | 1974/75 | 1975/76 |
|---|---|---|---|---|---|
| | | | (Thousands of Acres) | | |
| Manitoba | 20 | 15 | 40 | 40 | 23 |
| Saskatchewan | 175 | 140 | 225 | 200 | 76 |
| Alberta | 70 | 25 | 70 | 110 | 64 |
| Canada, Total | 265 | 180 | 335 | 350 | 163 |
| | | | (Yield, Pounds Per Acre) | | |
| Manitoba | 800 | 833 | 800 | 750 | 630 |
| Saskatchewan | 950 | 821 | 800 | 750 | 658 |
| Alberta | 750 | 960 | 714 | 727 | 719 |
| Canada, Total | 886 | 842 | 782 | 743 | 678 |
| | | | (Metric Tons) | | |
| Manitoba | 7,257 | 5,670 | 14,515 | 13,608 | 6,577 |
| Saskatchewan | 75,433 | 52,163 | 81,647 | 68,039 | 22,679 |
| Alberta | 23,813 | 10,886 | 22,679 | 36,287 | 20,865 |
| Canada, Total | 106,504 | 68,720 | 118,842 | 117,935 | 50,121 |

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 31

CANADIAN EXPORTS OF MUSTARDSEED

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Argentina | 55 | 99 | - | - | - |
| Australia | - | - | - | 65 | - |
| Belgium-Luxembourg | 3,691 | 9,818 | 8,035 | 6,292 | 114 |
| Brazil | - | - | 1/ | 93 | - |
| Chile | - | - | - | 4 | - |
| Costa Rica | - | - | - | 4 | 15 |
| Czechoslovakia | - | - | - | - | 108 |
| El Salvador | - | - | 4 | - | - |
| France | 557 | 5,382 | - | 129 | 290 |
| Germany, West | 9,713 | 8,652 | 11,459 | 2,165 | 3,483 |
| Guatemala | - | - | - | 1 | - |
| Israel | 19 | - | 25 | - | 3 |
| Japan | 9,401 | 6,264 | 6,149 | 7,565 | 9,058 |
| Leeward-Windward Is. | - | 1/ | - | - | - |
| Mexico | 199 | 151 | 177 | 281 | 272 |
| Netherlands | 10,449 | 10,839 | 10,791 | 18,048 | 11,057 |
| New Zealand | 1 | - | - | 1 | - |
| Philippines | - | - | - | - | 4 |
| Spain | 1 | - | - | - | 17 |
| Sweden | - | - | - | 54 | 54 |
| Switzerland | - | 549 | 684 | 94 | 430 |
| United Kingdom | 812 | 507 | 36 | 637 | 1,253 |
| United States | 37,494 | 43,278 | 34,052 | 33,460 | 31,659 |
| U.S.S.R. | - | - | 24 | - | - |
| Venezuela | 10 | - | 1 | 22 | 24 |
| Total | 76,941 | 85,544 | 71,441 | 68,925 | 57,841 |
| Total Value ($'000) | 8,124 | 9,458 | 13,812 | 21,171 | 22,939 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 32

CANADIAN IMPORTS OF GROUND MUSTARD

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| France | - | 5 | - | - | 4 |
| Germany, West | - | 4 | 4 | 1/ | 2 |
| Hong Kong | 1 | 1 | 1 | 1/ | 1/ |
| India | - | - | - | - | 1/ |
| Japan | - | - | 1 | 1/ | 1/ |
| People's Republic of China | 1 | - | - | 3 | |
| Taiwan | - | - | - | - | 2 |
| United Kingdom | 239 | 207 | 271 | 306 | 317 |
| United States | 125 | 63 | 41 | 56 | 65 |
| Total | 366 | 280 | 319 | 368 | 393 |
| Total Value ($'000) | 347 | 314 | 407 | 424 | 522 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

# CHAPTER 8

## OTHER OILSEED CAKE AND MEAL

Canadian miscellaneous oilseed cake and meal imports (including copra meal, sunflower meal, mustard meal and cake, cocoa expeller meal and copra expeller meal) for 1975 returned to the level of 1973 after increasing substantially in 1974 (Table 33). These imports remain nominal in relation to imports of soybean meal and are likely to continue to be, except for some uses, given the present world stocks and prices for soybeans.

Cottonseed meal imports increased slightly in 1975 over 1974 but remain at a level of only 25% of the unusually large volume of 1973. Oilseed cake and meal (n.e.s.) imports in 1975 continued at an elevated level over recent years but dropped about 30% from the peak year of 1974.

Exports of Canadian oilseed cake and meal (n.e.s.) in 1975 were limited to four metric tons to St. Pierre and Miquelon (Table 34).

TABLE 33

CANADIAN IMPORTS OF MISCELLANEOUS OILSEED CAKE AND MEALS

(Metric Tons)

| PRODUCT | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Cottonseed Meal | 114 | 95 | 1,228 | 307 | 317 |
| Oilseed Cake & Meal (n.e.s.) | 227 | 352 | 1,411 | 3,303 | 2,317 |
| Total | 341 | 447 | 2,639 | 3,610 | 2,634 |
| Total Value ($'000) | 33 | 48 | 506 | 598 | 390 |

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 34

CANADIAN EXPORTS OF OILSEED CAKES AND MEALS (NES)

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Barbados | 16 | 10 | - | - | - |
| Belgium-Luxembourg | - | - | 54 | - | - |
| Bermuda | - | - | 29 | - | - |
| Cuba | 2 | 7 | - | - | - |
| France | - | - | 1,887 | - | - |
| Germany, West | - | - | 36 | - | - |
| Guyana | 7 | 9 | - | - | - |
| Italy | - | 2 | 9,353 | - | - |
| Japan | - | - | 70,725 | - | - |
| Korea,South | - | 2 | - | - | - |
| Leeward-Windward Is. | 43 | - | - | - | - |
| Netherlands-Antilles | 2,609 | 3,397 | 9,334 | - | - |
| Norway | - | - | 18 | - | - |
| Philippines | - | 994 | - | - | - |
| St. Pierre-Miquelon | - | - | - | - | 4 |
| United Kingdom | 6,573 | 33,798 | 547 | - | - |
| United States | 1,494 | 10,482 | 20,590 | - | - |
| TOTAL | 10,745 | 48,704 | 112,575 | - | 4 |
| Total Value ($'000) | 554 | 2,883 | 6,706 | - | 1 |

SOURCE: Statistics Canada, Catalogue No. 65-004

# CHAPTER 9

## DEODORIZED FATS AND OILS

This chapter deals with the Canadian production of margarine, shortening and salad oils, the importation of cocoa butter, coconut, corn, cottonseed, olive, palm, palm kernel and peanut oils and the imports and exports of other vegetable fats and oils (n.e.s.).

Vegetable oils accounted for 86% of the total Canadian production of margarine, shortening and salad oils in 1975, up from 84% in 1974. Marine oils remained at 2% of the production in both years while animal fats dropped from 14% in 1974 to 12% in 1975 (Table 35). Margarine oil increased its portion of deodorized fats and oils production from 26% in 1974 to 28% in 1975. Shortening oil production accounted for 48% in 1975 against 50% in 1974 and salad oil continued to use 24% of production in both years.

Cocoa butter imports decreased substantially in 1975 to the lowest level in five years (Table 37). Canada purchased this lesser amount from only eight nations as opposed to the 15 who sold to this country in 1974. No imports were reported from Australia, Ghana, Nigeria and the United States while imports from the Netherlands and the United Kingdom increased significantly. The average price per metric ton increased by more than 100% from $1,521.67 in 1974 to $3,296.19 in 1975.

Imports of coconut oil in 1975 remained at an average level for the past five years (Table 38). However, the average cost per metric ton declined approximately 50% from $953.45 in 1974 to $464.63 in 1975. Sri Lanka continues to be our major supplier with the Philippines replacing Malaysia as a second major supplier. Australia's exports of coconut oil to Canada in 1975 replaced Fiji as a supplier.

Corn oil imports in 1975 remained at the same level as in 1974 which was somewhat higher than in previous years. The United States supplied 99.9% of the product (Table 39). In terms of average cost per metric ton Canada paid $718.67 in 1975 compared with $869.86 in 1974 but this was still well over the level of $400.00 - $500.00 of the previous three years.

Imports of cottonseed oil were practically unchanged in 1975 over 1974 and the United States was our only supplier (Table 40). Average cost per metric ton declined to $677.39 in 1975 from $724.72 in 1974 but was almost 100% over the level of $280.00 - $370.00 in 1971/72/73.

Olive oil imports dropped to the lowest level in five years (Table 41). Spain and Italy continue to be our major suppliers with Greece increasing its exports of this commodity to Canada from 1974 to 1975 by approximately 400% to become another major supplier. Average cost per metric ton has increased steadily from $905.66 in 1971 to $2,095.17 in 1975. 1975's price is up from $1,909.05 in 1974.

Palm oil imports in 1975 have shown the greatest increase of any of the imported oils. Imports in 1975 were 250% higher than in 1974 with approximately 90% coming from Malaysia and Indonesia (Table 42). The Ivory Coast became a supplier of this product for the first time in a number of years. Average price per metric ton fell from the peak of $658.74 in 1974 to $473.49 in 1975. However, the current cost is more than 100% greater than the average of $175.00 - $235.00 in 1971/72/73.

Imports of palm kernel oil did not keep pace with the increase in palm oil between 1974 and 1975, however, they did increase slightly (Table 43). Malaysia remained our major supplier, shipping some 80% of our requirements. Indonesia became a secondary supplier along with the United States. In terms of average cost per metric ton a 50% reduction occurred in 1975 from the level prevailing in 1974 ($503.73 versus $1,018.97). This new level of cost is still substantially over the $215.00 - $365.00 level of the early 1970's.

Peanut oil imports continue at historic amounts (Table 44). Brazil has come to challenge the United States as our major supplier. Senegal has also appeared for the first time in the last five years as a new supplier of quantity. The cost per metric ton decreased slightly from 1974, $911.58 to $869.12 in 1975. Again these figures are considerably higher than the level of $370.00 - $510.00 which prevailed in 1971/72/73.

Imports of other vegetable fats and oils (n.e.s.) decreased by 50% in 1975 from 1974, but were still almost double those of 1971 and 1972 (Table 36). Greece became one of our major suppliers for the first time.

Exports of other vegetable fats and oils (n.e.s.) increased by approximately 25% in 1975 over 1974 (Table 45). Haiti and Saudi Arabia became customers for the first time while Cuba increased her imports of these commodities from Canada substantially.

TABLE 35

CANADIAN PRODUCTION OF DEODORIZED FATS AND OILS

(Metric Tons)

| | 1974 | | | | 1975 | | | |
|---|---|---|---|---|---|---|---|---|
| VEGETABLE OILS | Margarine Oil | Shortening Oil | Salad Oil | Total | Margarine Oil | Shortening Oil | Salad Oil | Total |
| Coconut | 285 | 10,509 | 17 | 10,811 | 374 | 16,184 | 116 | 16,674 |
| Corn | 4,722 | 161 | X | X | 5,908 | 87 | X | X |
| Cottonseed | 18 | 4,347 | 399 | 4,764 | 249 | 4,326 | 380 | 4,955 |
| Palm | 4,046 | 9,072 | 119 | 13,237 | 6,241 | 25,554 | 1,476 | 33,271 |
| Palm Kernel | 4 | 3,889 | - | 3,893 | 10 | 5,039 | 91 | 5,140 |
| Peanut | - | 2,334 | X | X | - | 2,480 | X | X |
| Rapeseed | 28,769 | 29,655 | 32,801 | 91,225 | 33,709 | 22,043 | 38,816 | 94,568 |
| Soybean | 41,013 | 54,411 | 22,535 | 117,959 | 39,695 | 46,189 | 19,446 | 105,330 |
| Sunflowerseed | 48 | 1,863 | 7,413 | 9,324 | 45 | 241 | X | X |
| Other Vegetable | 186 | 530 | 26 | 742 | 567 | 296 | 168 | 1,031 |
| TOTAL VEGETABLE OILS | 79,093 | 116,774 | 76,529 | 272,396 | 86,798 | 122,439 | 80,314 | 289,551 |
| MARINE OILS | | | | | | | | |
| Herring | 2,873 | 2,076 | - | 4,949 | 3,385 | 3,127 | - | 6,512 |
| Seal | 137 | 337 | - | 474 | 231 | - | - | 231 |
| Whale | - | - | - | - | - | - | - | - |
| Other Marine | 43 | 461 | - | 504 | 45 | 225 | - | 270 |
| TOTAL MARINE OILS | 3,053 | 2,874 | - | 5,927 | 3,661 | 3,352 | - | 7,013 |
| ANIMAL FATS | | | | | | | | |
| Lard | 2,020 | 19,307 | - | 21,327 | 1,763 | 13,049 | - | 14,812 |
| Oleo, All Types | - | 1,208 | - | 1,208 | 4 | 669 | - | 673 |
| Tallow, Edible | 220 | 22,339 | 8 | 22,567 | 1,031 | 23,820 | - | 24,851 |
| TOTAL ANIMAL FATS | 2,240 | 42,854 | 8 | 45,102 | 2,798 | 37,538 | - | 40,336 |
| TOTAL ALL FATS & OILS | 84,386 | 162,502 | 76,537 | 323,425 | 93,257 | 163,329 | 80,314 | 336,900 |

TABLE 35 (Cont'd)

X Confidential to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 32-006

TABLE 36

CANADIAN IMPORTS OF VEGETABLE OILS AND FATS (NES)

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Austria | - | 5 | 6 | 1 | 10 |
| Belgium-Luxembourg | - | - | - | 18 | - |
| Brazil | 14 | 9 | 35 | 18 | 14 |
| Denmark | 1 | 163 | 10 | 140 | 146 |
| France | 1 | 51 | 2 | 2 | 1 |
| Germany, West | 3 | 1 | 16 | 72 | 6 |
| Greece | - | - | - | 185 | 545 |
| Hong Kong | 12 | 27 | 22 | 30 | 31 |
| India | - | - | - | 1/ | 1/ |
| Ireland | - | - | - | - | - |
| Israel | - | 1 | 6 | - | - |
| Japan | 13 | 22 | 28 | 59 | 33 |
| Lebanon | 1/ | 2 | 1 | - | 1/ |
| Netherlands | - | - | - | - | 64 |
| Malaysia | 1/ | 1/ | - | - | - |
| Peoples' Republic of China | 1 | 1/ | 1 | 5 | 7 |
| Singapore | - | - | - | 1/ | - |
| Switzerland | 11 | 26 | 1 | 1 | 3 |
| Syria | - | - | - | 1 | - |
| Taiwan | - | - | - | 1/ | 1/ |
| United Kingdom | - | 18 | 289 | 1,994 | 572 |
| United States | 1,158 | 1,428 | 4,077 | 3,441 | 1,521 |
| Yugoslavia | - | 1 | 1 | - | 6 |
| TOTAL | 1,218 | 1,760 | 4,501 | 5,973 | 2,965 |
| Total Value ($'000) | 656 | 859 | 1,597 | 7,447 | 3,129 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 37

CANADIAN IMPORTS OF COCOA BUTTER

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | - | - | - | 1,019 | - |
| Brazil | 101 | 250 | 351 | 1,677 | 426 |
| Cuba | 60 | 172 | 99 | - | 60 |
| Dominican Republic | - | - | 145 | 33 | - |
| Ecuador | - | - | - | 246 | - |
| Germany, West | - | - | 99 | 283 | 37 |
| Ghana | 2,667 | 2,631 | 1,198 | 1,016 | - |
| Guinea | - | - | - | 25 | - |
| Ireland | 62 | 34 | 42 | - | - |
| Ivory Coast | 50 | 762 | 99 | 977 | 236 |
| Jamaica | 30 | 132 | 50 | 44 | - |
| Leeward-Windward Is. | - | - | - | 30 | - |
| Mexico | - | 56 | 22 | - | 184 |
| Netherlands | 1,701 | 1,773 | 2,073 | 98 | 1,521 |
| Nigeria | - | 93 | 841 | 3,173 | - |
| Trinidad-Tobago | 4 | - | - | 10 | - |
| United Kingdom | 1,397 | 153 | 1,274 | 211 | 1,283 |
| United States | 539 | 238 | 295 | 4,241 | 613 |
| TOTAL | 6,614 | 6,298 | 6,593 | 13,175 | 4,362 |
| Total Value ($'000) | 8,576 | 7,807 | 12,925 | 20,048 | 14,378 |

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 38

CANADIAN IMPORTS OF COCONUT OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | 1,950 | - | 661 | 993 | 2,218 |
| British Oceania | - | - | 46 | - | - |
| Fiji | 2,453 | 318 | - | 1,721 | 1/ |
| Finland | - | - | - | - | 68 |
| Germany, West | 1 | 1/ | - | 1 | 1 |
| Jamaica | 1 | 6 | 1/ | - | - |
| Leeward-Windward Islands | - | - | 1 | - | - |
| Malaysia | 5,462 | 597 | 6,744 | 7,907 | 3,902 |
| Netherlands | 7 | 513 | 1,322 | - | - |
| Norway | - | - | - | 1/ | - |
| Philippines | 258 | 10,856 | 8,490 | 67 | 7,137 |
| Puerto Rico | - | - | 3 | 18 | - |
| Singapore | 16 | 42 | 4 | 5 | - |
| Sri Lanka | 3,050 | 14,248 | 1,728 | 8,096 | 10,540 |
| United Kingdom | 290 | 1,236 | 370 | 719 | 346 |
| United States | 7,149 | 4,474 | 1,922 | 2,423 | 1,600 |
| TOTAL | 20,644 | 32,294 | 21,297 | 21,956 | 25,816 |
| Total Value ($'000) | 6,465 | 6,311 | 7,643 | 20,934 | 11,995 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 39

CANADIAN IMPORTS OF CORN OIL
(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| France | - | 1/ | - | 1/ | 1/ |
| Germany, West | - | - | 309 | - | - |
| Netherlands | 1,235 | - | - | - | - |
| United Kingdom | 1,583 | 934 | 1,067 | 1,605 | - |
| United States | 5,200 | 7,244 | 5,226 | 8,752 | 10,172 |
| TOTAL | 8,018 | 8,178 | 6,603 | 10,358 | 10,173 |
| Total Value ($'000) | 3,588 | 3,183 | 3,291 | 9,010 | 7,311 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 40

CANADIAN IMPORTS OF COTTONSEED OIL
(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| United Kingdom | - | - | - | 1/ | - |
| United States | 10,393 | 10,190 | 8,402 | 11,333 | 11,289 |
| Total | 10,393 | 10,190 | 8,402 | 11,334 | 11,289 |
| Total Value ($'000) | 3,582 | 2,868 | 3,102 | 8,214 | 7,647 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 41

CANADIAN IMPORTS OF OLIVE OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Belgium-Luxembourg | 1/ | - | - | - | - |
| France | 15 | 45 | 30 | 38 | 30 |
| Germany, West | 1 | - | - | - | - |
| Greece | 394 | 386 | 130 | 105 | 417 |
| Israel | - | - | - | - | - |
| Italy | 686 | 925 | 698 | 773 | 611 |
| Lebanon | 1/ | - | - | - | - |
| Morocco | - | 20 | - | - | - |
| Portugal | 268 | 276 | 273 | 241 | 150 |
| Spain | 683 | 1,137 | 899 | 1,170 | 709 |
| Sweden | - | - | - | 8 | - |
| Switzerland | - | - | - | - | 17 |
| Tunisia | - | - | - | - | 22 |
| Turkey | 3 | - | - | 1 | 1 |
| United States | 118 | 111 | 54 | 66 | 29 |
| Total | 2,173 | 2,902 | 2,086 | 2,408 | 1,986 |
| Total Value ($'000) | 1,968 | 2,854 | 2,795 | 4,597 | 4,161 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 42

CANADIAN IMPORTS OF PALM OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Germany, West | 1/ | - | 3 | 1 | - |
| Indonesia | - | - | - | 2,011 | 13,085 |
| Ivory Coast | - | - | - | - | 1,385 |
| Malaysia | 12,807 | 29,043 | 19,558 | 10,503 | 23,675 |
| Singapore | - | - | - | 1,020 | 509 |
| United Kingdom | 1 | 1,528 | 1/ | 3 | 1/ |
| United States | 53 | 289 | 16 | 2,658 | 2,627 |
| Total | 12,862 | 30,861 | 19,578 | 16,199 | 41,283 |
| Total Value ($'000) | 2,913 | 5,521 | 4,560 | 10,671 | 19,547 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 43

CANADIAN IMPORTS OF PALM KERNEL OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Congo-Kinshasa | 2,353 | - | - | - | - |
| Hong Kong | - | - | - | 200 | - |
| Indonesia | - | - | - | - | 473 |
| Malaysia | 230 | 4,400 | 4,474 | 2,970 | 3,966 |
| Netherlands | 20 | 15 | 142 | 78 | 13 |
| Nigeria | 1,868 | 626 | 975 | - | - |
| Singapore | - | 707 | - | - | - |
| United States | 429 | - | 351 | 1,126 | 640 |
| Total | 4,902 | 5,749 | 5,943 | 4,376 | 5,092 |
| Total Value ($'000) | 1,568 | 1,257 | 2,160 | 4,459 | 2,565 |

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 44

CANADIAN IMPORTS OF PEANUT OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Belgium-Luxembourg | - | 1,269 | - | - | - |
| Brazil | - | - | - | - | 2,444 |
| France | 19 | 74 | - | - | 18 |
| Gambia | 613 | 797 | - | - | - |
| Hong Kong | 80 | 90 | 94 | 190 | 97 |
| Italy | 1 | - | - | - | - |
| Japan | - | - | - | - | 5 |
| Netherlands | - | 203 | - | - | - |
| Nigeria | 508 | 266 | 2,155 | - | - |
| Senegal | - | - | - | - | 507 |
| United Kingdom | - | - | - | 519 | 680 |
| United States | 4,111 | 4,697 | 5,132 | 4,808 | 3,095 |
| Total | 5,333 | 7,398 | 7,382 | 5,519 | 6,846 |
| Total Value ($'000) | 2,155 | 2,766 | 3,769 | 5,031 | 5,950 |

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 45

CANADIAN EXPORTS OF OTHER VEGETABLE OILS AND FATS (NES) 1/

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | 426 | - | - | - | 2/ |
| Bahamas | 2 | 2 | 5 | - | - |
| Barbados | 39 | 34 | 28 | 43 | 10 |
| Bermuda | 5 | 3 | 20 | 2 | - |
| British Honduras | 2/ | 1 | 1 | - | - |
| Costa Rica | - | 3 | - | - | - |
| Cuba | 3 | 8 | 14 | 1 | 183 |
| Cyprus | - | - | - | - | 2/ |
| El Salvador | - | 2/ | - | - | - |
| France | - | - | - | - | - |
| Germany, West | - | - | - | 1 | 2/ |
| Greenland | - | - | 1/ | - | - |
| Guatemala | - | 1 | - | - | - |
| Guyana | 26 | 37 | 26 | 154 | 6 |
| Haiti | - | - | - | - | 111 |
| Honduras | - | - | 6 | - | - |
| Hong Kong | - | 1,234 | 419 | - | - |
| Italy | 2/ | - | - | - | - |
| Jamaica | - | 18 | 6 | 1 | 1 |
| Japan | - | 2/ | - | - | - |
| Kenya | 1 | 2 | 2 | 1/ | - |
| Kuwait | - | - | - | 11 | - |
| Leeward-Windward Is. | 53 | 40 | 31 | 9 | 63 |
| Mexico | - | - | 9 | - | - |
| Netherlands-Antilles | 2/ | 1 | - | - | - |
| Nigeria | 1/ | - | - | - | - |
| Pakistan | - | 2,266 | - | - | - |
| Saudi Arabia | - | - | - | - | 99 |
| Sierra Leone | 5 | - | - | - | - |
| South Africa | - | - | - | 2/ | 2/ |
| St. Pierre-Miquelon | 1 | 2/ | 1 | 2/ | - |
| Trinidad-Tobago | 262 | 132 | 133 | 159 | 29 |
| United Kingdom | 3,756 | 4,439 | 12,100 | - | 71 |
| United States | 608 | 874 | 445 | 375 | 364 |
| U.S. Oceania | 2 | - | - | - | - |
| Total | 5,195 | 9,097 | 13,249 | 763 | 944 |
| Total Value ($'000) | 1,854 | 3,093 | 1,238 | 513 | 512 |

1/ This export class No. 393-99 includes sunflower oil, salad & cooking oil and certain speciality fats like pan greases. Prior to 1973 it included rapeseed oil.

2/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004.

# CHAPTER 10

## SPECIFIED FATS AND OILS

Production of both margarine and butter (Table 46) jumped dramatically in 1975. Butter and whole milk production were doubtless spurred by the increase in the target support price for milk announced during the year. While the utilization of butterfat in manufactured dairy products (Table 52) showed a marked increase from the previous year, it is interesting to note that actual butter consumption declined in 1975 compared to the previous year by 27 million pounds or 9%.

Shortening production declined in total in the year under review, although consumer-sized packages showed a substantial increase from previous years. In addition, imports of shortening (Table 47) continued the rapid climb shown in 1974. There was a striking reduction in imports of vegetable cooking fats and packaged salad oils (Table 49) perhaps indicating an increase in the use of domestically produced product.

Production of salad oil in 1975 increased by 4,000 metric tons over 1974, reflecting a continued steady demand for this product.

The reduction in lard production of some 7,000 metric tons (Table 46) is indicative of the reduction of 14% in the hog slaughter compared to the previous year. Lard production will probably decline a further 5% in 1976 in line with the expected reduction in hog slaughter. While total beef slaughterings for the year were up some 12% over 1974, edible tallow production increased only slightly more than 6%. This was probably due to the lighter weight cattle that were marketed and the fact that they carried less fat than in the previous year, due to the change in type of feeding.

Canada continued to be a net importer of lard (Tables 48 and 50) even though imports declined by 31% from 1974.

In 1975 Cuba and the United States continued to be major customers for tallow and animal oils and fats, (Table 51). Sales to Japan continued the decline shown in previous years, South Korea gained importance as an export market for these

products, and shipments to the Netherlands, People's Republic of China and the U.K., all major trading partners, declined. For the first time sales of these products were made to the U.S.S.R.

As noted in last year's reports, production and sales of all animal fats and oils which are by-products of the slaughterings and meat processing industries depend on livestock numbers available for slaughter. Comment has already been made on lard production for 1976, edible and inedible tallow production will likely be at about the same level as in 1975.

TABLE 46

CANADIAN PRODUCTION OF SPECIFIED FATS AND OILS PRODUCTS

(Thousands of Metric Tons)

| | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Margarine[1] | 90 | 96 | 98 | 108 | 119 |
| Butter[2] | 134 | 136 | 98 | 108 | 131 |
| SHORTENING | | | | | |
| Packaged[3] | 19 | 16 | 17 | 17 | 23 |
| Bulk[4] | 128 | 141 | 163 | 154 | 148 |
| REFINED OILS | | | | | |
| Salad | 54 | 64 | 69 | 77 | 81 |
| Lard | 63 | 55 | 50 | 50 | 43 |
| TALLOW[6] | | | | | |
| Edible | 17 | 20 | 18 | 16 | 17 |
| Inedible | 181 | 184 | 184 | 182 | 182 |

1/ Includes retail and commercial packages. Commercial sales (21-450 pound) packages account for about 3% of total output.

2/ Includes factory and farm butter.

3/ Retail packages up to 20 pounds only.

4/ Covers commercial (21-450 pound) packages, bulk and other than packaged retail sales of manufacturers of shortening and deodorized shortening oil. Includes baking and frying fats and oils.

5/ Rendered lard includes shipments of processed lard in retail and commercial packages and bulk sales.

6/ Shipments for year.

SOURCE: Statistics Canada, Catalogue No. 32-006.

TABLE 47

CANADIAN IMPORTS OF MARGARINE AND SHORTENING

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Denmark | - | - | 1 | - | - |
| Germany, West | 1 | 5 | 1 | 9 | 1 |
| Greece | - | - | 3 | - | - |
| Norway | 1 | - | - | - | - |
| Sweden | 55 | 80 | 39 | 69 | 5 |
| United States | 2,723 | 5,047 | 4,314 | 11,903 | 15,695 |
| Total | 2,781 | 5,133 | 4,360 | 11,983 | 15,701 |
| Total Value ($'000) | 1,126 | 1,643 | 1,743 | 9,005 | 11,399 |

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 48

CANADIAN EXPORTS OF MARGARINE, SHORTENING AND LARD

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Bahamas | 8 | - | - | - | 1 |
| Barbados | - | - | 39 | - | - |
| Bermuda | 22 | 24 | 22 | 22 | 14 |
| Germany, West | - | - | - | - | 1 |
| Greenland | - | 1/ | 3 | - | - |
| Guyana | 1/ | - | - | - | - |
| Jamaica | 5 | 8 | 4 | 30 | 22 |
| Japan | - | - | - | 18 | - |
| Leeward-Windward Islands | 1/ | 1/ | 1/ | 1/ | 3 |
| Netherlands-Antilles | 6 | 2 | 3 | 1 | - |
| St. Pierre-Miquelon | 41 | 51 | 50 | 44 | 42 |
| Trinidad-Tobago | - | - | - | - | 1/ |
| United States | 284 | 148 | 22 | 234 | 182 |
| Yemen | - | - | 1/ | - | - |
| Total | 369 | 235 | 144 | 352 | 268 |
| Total Value ($'000) | 118 | 91 | 100 | 290 | 248 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue 65-004

TABLE 49

CANADIAN IMPORTS OF VEGETABLE COOKING FATS AND PACKAGED SALAD OILS

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Denmark | 1 | - | - | 2 | - |
| France | - | 20 | - | 17 | 12 |
| Germany, West | - | 1 | - | - | - |
| Greece | - | - | 8 | 18 | 15 |
| Hong Kong | 1/ | 1 | 1 | - | - |
| Israel | - | - | - | 1,000 | - |
| Italy | - | 8 | - | - | - |
| Singapore | - | 1 | - | - | - |
| Sweden | 1/ | 17 | 26 | 18 | 14 |
| United Kingdom | 1 | 4 | 285 | 16 | 57 |
| United States | 376 | 488 | 709 | 386 | 594 |
| Total | 380 | 543 | 1,030 | 1,461 | 692 |
| Total Value ($'000) | 182 | 234 | 636 | 471 | 389 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 50

CANADIAN IMPORTS OF LARD, TALLOW, ANIMAL OILS AND FATS

(Metric Tons)

LARD

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | - | - | 1 | 9 | - |
| Norway | - | - | - | - | 1/ |
| United States | 6,085 | 9,782 | 7,158 | 17,671 | 12,118 |
| Total | 6,085 | 9,782 | 7,160 | 17,680 | 12,119 |
| Total Value ($'000) | 1,493 | 2,258 | 2,531 | 12,306 | 8,276 |

TALLOW, ANIMAL OILS AND FATS (NES)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | - | 9 | 22 | 3 | 11 |
| Germany, West | - | - | 1 | - | 10 |
| Netherlands | - | 673 | - | - | - |
| United Kingdom | 2 | - | 1 | - | - |
| United States | 9,883 | 8,871 | 3,228 | 4,314 | 2,134 |
| Total | 9,885 | 9,553 | 3,253 | 4,318 | 2,155 |
| Total Value ($'000) | 1,996 | 1,929 | 1,226 | 1,803 | 768 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 51

CANADIAN EXPORTS OF TALLOW, ANIMAL OILS AND FATS (NES)

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Barbados | - | - | 23 | 90 | 27 |
| Belgium-Luxembourg | 588 | 2,438 | 1,183 | 598 | 996 |
| Bermuda | 1/ | 1/ | - | - | - |
| Brazil | - | - | - | 97 | - |
| Colombia | - | - | - | - | 52 |
| Cuba | 1,394 | 995 | 4,904 | 13,638 | 13,587 |
| Dominican Republic | - | - | - | 18 | - |
| France | 1,603 | 1/ | 949 | 1,002 | 5 |
| Germany, West | 963 | 902 | 1,470 | - | 300 |
| Ghana | - | 249 | - | 596 | 749 |
| Guatemala | - | 1 | - | 32 | 21 |
| Guyana | - | - | - | - | 136 |
| Ireland | - | - | - | - | 300 |
| Italy | - | - | - | - | 548 |
| Jamaica | 66 | 6 | 28 | 238 | 299 |
| Japan | 25,753 | 22,713 | 19,460 | 15,376 | 10,400 |
| Kenya | 1,578 | 54 | - | - | - |
| Korea, South | - | - | 985 | 5,272 | 15,700 |
| Leeward-Windward Is. | 113 | 69 | 59 | 4 | - |
| Malaysia | 30 | 18 | - | - | 73 |
| Mexico | - | - | - | 16 | 25 |
| Morocco | - | - | - | - | 574 |
| Netherlands | 19,430 | 23,920 | 6,709 | 24,184 | 16,697 |
| Netherlands-Antilles | - | - | - | 3 | - |
| Nigeria | - | - | - | - | 924 |
| Norway | - | - | 297 | 16 | 71 |
| Pakistan | 193 | - | - | - | - |
| People's Republic of China | 9,668 | 21,421 | 9,948 | 11,112 | 5,589 |
| Portugal | - | - | - | - | 52 |
| Puerto Rico | - | - | - | 17 | - |
| Senegal | - | - | - | 997 | 708 |
| Singapore | 11 | 1 | - | 36 | 158 |
| South Africa | 860 | - | - | - | - |
| Spain | 4,903 | 3,354 | 936 | 1,550 | 9,656 |
| St. Pierre-Miquelon | - | 1/ | 1/ | 1/ | - |
| Surinam | 15 | 22 | - | - | - |
| Sweden | 1/ | - | - | - | - |
| Switzerland | 13 | 33 | 93 | 150 | 209 |
| Taiwan | - | 694 | - | - | - |
| Trinidad-Tobago | 1,195 | 803 | 588 | 326 | 294 |
| United Kingdom | 21,700 | 17,725 | 22,140 | 13,803 | 5,541 |
| United States | 13,551 | 11,965 | 16,221 | 10,885 | 11,044 |
| U.S.S.R. | - | - | - | - | 3,774 |
| Venezuela | - | - | 18 | 193 | 69 |
| Zaire | - | - | - | - | 747 |
| Zambia | - | 27 | - | 1,203 | - |
| Total | 103,638 | 107,423 | 87,042 | 101,458 | 99,335 |
| Total Value ($'000) | 19,228 | 16,479 | 24,407 | 41,253 | 32,218 |

TABLE 51 (Cont'd)

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 52

CANADIAN TRENDS IN BUTTERFAT PRODUCTION AND UTILIZATION

(Thousands of Metric Tons)

| | Total Milk Production | | Butterfat Utilization | | | |
|---|---|---|---|---|---|---|
| Year | Whole Milk | Butterfat Equivalent[1] | Manufactured Dairy Products[2] | Fluid Milk Sales[3] | Farm Home Consumed | Fed on Farms |
| 1966 | 8,334 | 291 | 183 | 83 | 13 | 11 |
| 1967 | 8,259 | 289 | 180 | 82 | 13 | 10 |
| 1968 | 8,329 | 290 | 184 | 81 | 13 | 10 |
| 1969 | 8,487 | 297 | 191 | 80 | 13 | 10 |
| 1970 | 8,306 | 290 | 183 | 82 | 12 | 10 |
| 1971 | 8,062 | 282 | 174 | 83 | 11 | 10 |
| 1972 | 8,032 | 281 | 177 | 86 | 7 | 10 |
| 1973 | 7,659 | 261 | 155 | 87 | 7 | 11 |
| 1974 | 7,561 | 259 | 153[6] | 89 | 6 | 11 |
| 1975 | 8,017 | 273 | 169 | 87 | 5 | 12 |

BUTTERFAT UTILIZATION IN MANUFACTURED DAIRY PRODUCTS

| Year | Total | Creamery Butter | Cheese[4] | Concentrated Whole Milk Products | Ice-Cream Mix |
|---|---|---|---|---|---|
| 1966 | 181 | 122 | 34 | 13 | 10 |
| 1967 | 180 | 121 | 33 | 13 | 11 |
| 1968 | 184 | 123 | 34 | 12 | 11 |
| 1969 | 191 | 129 | 35 | 24 | [5] |
| 1970 | 183 | 121 | 37 | 23 | [5] |
| 1971 | 174 | 106 | 38 | 10 | 16 |
| 1972 | 177 | 108 | 38 | 10 | 16 |
| 1973 | 155 | 92 | 38 | 10 | 14 |
| 1974 | 153[6] | 85 | 44[6] | 9 | 14 |
| 1975 | 169 | 104 | 41 | 9 | 15 |

TABLE 52 (Cont'd)

FOOTNOTES TO CANADIAN TRENDS IN BUTTERFAT PRODUCTION AND UTILIZATION

1/ Fat content of milk based on conversion factor of 3.5%.

2/ Includes creamery butter, cheddar cheese (bulk of all Canadian cheese production), other cheese, concentrated whole milk products, ice-cream mix.

3/ Fluid milk sales represent whole milk sales from farms for use in milk and cream.

4/ Includes mainly cheddar cheese and other factory cheese made from whole milk and cream. Excludes creamed cottage cheese.

5/ Included with concentrated whole milk products.

6/ Revised figure.

SOURCE: Based on unpublished Statistics Canada data.

TABLE 53

INDUSTRY SELLING PRICE INDEXES FOR CERTAIN FATS

(1961 - 100)

| PRODUCT | 1971 | 1972 | 1973 | 1974 | 1975[1/] |
|---|---|---|---|---|---|
| Butter, Creamery | 107.9 | 111.3 | 114.9 | 128.5 | 169.2 |
| Lard | 109.3 | 117.2 | - | - | - |
| Margarine[2/] | 122.9 | 123.3 | 142.1 | 231.7 | 227.5 |
| Margarine[3/] | 113.0 | 112.1 | 124.3 | 213.5 | 211.5 |
| Shortening | 100.2 | 100.2 | 129.6 | 188.9 | 208.2 |

1/ To October only.

2/ As reported by slaughtering and meat packing firms.

3/ As reported by other manufacturers.

SOURCE: Statistics Canada, Catalogue No. 62-002.

# CHAPTER 11

# MARINE AND FISH OILS AND MEALS

## Industry Trends - Catch and Utilization

The landings of herring which reached a peak plateau of about half a million metric tons in the late sixties, continued on a descending trend in the seventies declining to a low of 270,253 metric tons in 1974. In 1975 the catch increased by 10% to 298,000 metric tons.

In addition to the drop in the herring catch, the progressive diversion of supplies from reduction to food herring has continued in 1975 and is likely to continue in the future. With the strengthening of the Western European herring food markets due to diminishing catches, a governmental task force is currently studying the possibility of diverting in 1976, 35,000 to 50,000 tons of herring from reduction to meal and oil to herring products for human consumption.

It is too early to assess the benefits on herring stocks, particularly on the east coast from the proposed establishment by Canada of a 200-mile economic fishing zone. However, any increase in supplies are likely to be gradual and it is expected that every effort will be made towards utilizing herring for food.

## Production - Marine Oils

The total marine oil production in Canada from fish and whales was further reduced in 1975 by lack of raw material supplies. The overall decline compared to 1974 was 54% from 23,239 metric tons to 10,763 metric tons and occurred entirely on the Atlantic coast (Table 54). Production on the Pacific coast was lower by only 22 metric tons. The salmon oil production decreased by 46% from 415 metric tons to 226 metric tons while the herring oil production increased by 30% from 585 metric tons in 1974 to 762 metric tons in 1975.

On the Atlantic coast, the shortfalls were substantial for all production; groundfish body or offal oil was down from 7,222 to 4,192 metric tons (-42%) and herring oil lower by 61% from 13,936 metric tons in 1974 to 5,378 in 1975.

## Fish Meals

The decline in fish meal production in 1975 compared to 1974 was not as accentuated as it was in the production of oil. The total reduction for both coasts was 10% from 51,657 metric tons to 46,840 tons (Table 57). The Atlantic region experienced a decrease of 13% from 45,505 metric tons to 39,765 while the Pacific coast production was higher by 15% at 7,075 metric tons in 1975 as compared to 6,152 metric tons in 1974.

## Exports and Imports

Exports of marine oils have continued to fall sharply from 11,000 metric tons in 1971 to 8,845 metric tons in 1974 and to a low of 4,891 in 1975 (Table 56). Imports at 878 metric tons in 1975 were slightly higher than the previous but still substantially lower than the average of 1971-73 of about 1,500 metric tons (Table 55).

Exports of fish meal in 1975 declined from 34,678 the previous year to 24,291 metric tons while imports increased from 261 metric tons in 1974 to 311 metric tons in 1975 (Tables 58 and 59).

TABLE 54

CANADIAN PRODUCTION OF MARINE OILS BY TYPES AND AREAS

(Metric Tons)

| PRODUCT | 1973 | 1974 | 1975[1/] |
|---|---|---|---|
| ATLANTIC COAST | | | |
| Body or Offal Oil: | | | |
| Groundfish | 11,039 | 7,222 | 4,192 |
| Herring | 15,022 | 13,936 | 5,378 |
| Other[2/] | 394 | 755 | 19 |
| Liver Oil: | | | |
| Groundfish | 419 | 226 | 96 |
| ATLANTIC TOTAL | 26,874 | 22,139 | 9,685 |
| PACIFIC COAST | | | |
| Body or Offal Oil: | | | |
| Herring | 1,105 | 585 | 762[3/] |
| Salmon | 802 | 415 | 226[3/] |
| Other | 217 | 100 | 90[3/] |
| PACIFIC TOTAL | 2,124 | 1,100 | 1,078[3/] |
| CANADA TOTAL | 28,998 | 23,239 | 10,763 |

1/ Preliminary

2/ Primarily whale oil

3/ Estimate

SOURCE: Based on Environment Canada data.

TABLE 55

CANADIAN IMPORTS OF FISH AND MARINE OILS (NES)

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Denmark | - | - | 6 | 1/ | 1 |
| France | - | - | - | 1/ | - |
| Germany, West | - | - | - | 1/ | - |
| Japan | 4 | - | 6 | 89 | - |
| Norway | 2 | 167 | 134 | 179 | 629 |
| South Africa | 249 | 73 | 89 | 92 | - |
| United Kingdom | 232 | 234 | 323 | 165 | 49 |
| United States | 1,070 | 1,175 | 676 | 322 | 199 |
| TOTAL | 1,559 | 1,651 | 1,237 | 849 | 878 |
| Total Value ($'000) | 747 | 439 | 424 | 467 | 500 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 56

CANADIAN EXPORTS OF MARINE OILS BY TYPES

(Metric Tons)

| PRODUCT | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Cod Liver Oil, Sun Rotted | 2,313 | 998 | 1,270 | 1,043 | 868 |
| Herring Oil | 5,216 | 3,401 | 2,812 | 5,488 | 2,277 |
| Whale Oil | 2,857 | 2,177 | 1,224 | - | - |
| Fish & Marine Animal Oil, NES | 635 | 635 | 2,676 | 2,313 | 1,746 |
| TOTAL | 11,022 | 7,212 | 7,983 | 8,845 | 4,891 |
| Total Value ($'000) | 2,237 | 1,368 | 1,795 | 3,763 | 1,837 |

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 57

CANADIAN PRODUCTION OF FISH MEALS BY TYPES AND AREAS

| PRODUCT | 1973 | 1974 | 1975[1] |
|---|---|---|---|
| ATLANTIC COAST | | | |
| Groundfish | 34,485 | 26,700 | 24,779 |
| Herring | 13,650 | 16,484 | 14,399 |
| Other | 1,721 | 2,321 | 587 |
| ATLANTIC TOTAL | 49,856 | 45,505 | 39,765 |
| PACIFIC COAST | | | |
| Herring | 4,278 | 4,711 | 6,078[2] |
| Salmon | 1,561 | 887 | 453[2] |
| Other | 592 | 554 | 544[2] |
| PACIFIC TOTAL | 6,431 | 6,152 | 7,075 |
| CANADA TOTAL | 56,287 | 51,657 | 46,840 |

1/ Preliminary

2/ Estimate

SOURCE: Based on Environment Canada data.

TABLE 58

CANADIAN IMPORTS OF FISH MEAL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Denmark | - | - | - | 10 | - |
| France | - | - | - | - | 59 |
| Germany, West | - | - | - | 1/ | - |
| Japan | - | - | - | - | 2 |
| Peru | - | 944 | 21 | - | - |
| Puerto Rico | - | 20 | 81 | - | 41 |
| United Kingdom | - | - | - | 2 | - |
| United States | 22 | 255 | 379 | 245 | 209 |
| TOTAL | 22 | 1,220 | 482 | 261 | 311 |
| Total Value ($'000) | 5 | 216 | 121 | 83 | 87 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 59

CANADIAN EXPORTS OF FISH MEAL AND CONDENSED SOLUBLES

(Metric Tons)

| PRODUCT | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Herring Meal and Pilchard Meal | 41,129 | 20,605 | 12,997 | 16,281 | 14,733 |
| Fish Meal NES | 21,452 | 12,089 | 16,386 | 18,393 | 9,515 |
| Fish Condensed Homogenized Solubles | 98 | 176 | 185 | - | 43 |
| TOTAL (Meal Only) | 62,679 | 32,870 | 29,568 | 34,678 | 24,291 |
| TOTAL VALUE (Meal Only) ($'000) | 11,524 | 6,703 | 11,023 | 12,160 | 6,071 |

SOURCE: Statistics Canada, Catalogue No. 65-004

# CHAPTER 12

## THE CANADIAN FLAXSEED SITUATION

### Canadian Supply and Disposition of Flaxseed, Linseed Oil and Linseed Meal

Flaxseed production declined from a high of 47.9 million bushels in the 1970/71 crop year to 13.8 million bushels in the 1974/75 crop year (Table 60).

Since only two crushing plants are now operating, the domestic crush in 1974/75 is not reported by Statistics Canada. However, in 1973/74 the crush fell below the one million bushel mark. The principal reason for the decline has been reduced world demand for linseed oil.

### Canadian Exports of Flaxseed

Although Canada continues to be the world's largest exporter of flaxseed, exports have been on a continual decline since 1971 (Table 61). The major markets continue to be West Germany, Japan, the Netherlands, Poland, Czechoslovakia and the U.K. The worldwide recession which resulted in reduced industrial activity and relatively high prices has been responsible largely for the declining exports.

### Canadian Exports of Linseed Oil

Canadian exports of linseed oil increased in 1975 over 1974 mainly because of lower prices, however, exports in 1975 were well below the average of 1971 through 1973 (Table 64).

### Canadian Exports of Linseed Cake and Meal

Exports of linseed meal (Table 65) have declined in 1974 and 1975 even more dramatically from their 1971-73 levels than has been the case with linseed oil.

## Flaxseed Prices

Flaxseed prices (Table 66) began to climb in June 1973 reaching their peak of $12.19 per bushel in October 1974. Decreased world production and tight supplies were responsible for the price increases. Prices in January 1975 began to decline due to lack of demand and a build-up in the supplies of the main exporting countries, Canada, U.S.A. and Argentina.

Linseed oil is used almost entirely as an industrial oil in the manufacture of organic coatings such as paints, varnishes and linoleum. In these uses it has been largely replaced by other oils such as soybean oil as well as by petroleum derived products. Linseed oil is then facing increasing competition from substitutable materials and as a result its use appears to be declining.

TABLE 60

CANADIAN SUPPLY AND DISPOSITION OF FLAXSEED, LINSEED OIL AND LINSEED MEAL

(Crop Year)

| | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | (Thousands of Bushels) | | | | |
| FLAXSEED | | | | | |
| Stocks, Starting[1/] | 6,570 | 25,306 | 16,032 | 7,673 | 7,911 |
| Production | 47,966 | 22,387 | 17,617 | 19,400 | 13,800 |
| Imports | - | - | 3 | 17 | 16 |
| Exports | 21,194 | 25,741 | 19,640 | 15,503 | 10,519 |
| Domestic Crushing | 2,827 | 3,101 | 2,633 | 762 | x[2/] |
| LINSEED OIL | (Metric Tons) | | | | |
| Exports | 11,611 | 14,919 | 10,588 | 2,230 | 2,184 |
| Domestic Production | 24,947 | 26,762 | 22,762 | 6,601 | x[2/] |
| LINSEED MEAL | (Metric Tons) | | | | |
| Exports | 13,480, | 20,539 | 12,735 | 24 | 196 |
| Domestic Production | 45,359 | 49,875 | 42,037 | 11,932 | x[2/] |

1/ Total Stocks in all positions.

2/ Confidential - to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 22-006

TABLE 61

CANADIAN EXPORTS OF FLAXSEED

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | - | 12,031 | - | 5,633 | - |
| Austria | - | - | - | - | 34 |
| Belgium-Luxembourg | 26,290 | 28,552 | 11,886 | 7,477 | 2,951 |
| Czechoslovakia | 6,867 | 5,973 | 15,826 | 25,004 | 17,717 |
| Denmark | 1,691 | 316 | 2,062 | - | - |
| Finland | 2,088 | - | - | - | - |
| France | 11,963 | 8,181 | 7,772 | 5,202 | 1,848 |
| Germany, East | 3,939 | - | - | 3,860 | - |
| Germany, West | 89,938 | 79,224 | 117,865 | 110,680 | 77,619 |
| Greece | 4,449 | 11,238 | 1,371 | 2,184 | 1,050 |
| Israel | 1,847 | - | - | - | - |
| Italy | 16,014 | 7,910 | 12,755 | - | - |
| Japan | 118,347 | 107,328 | 110,123 | 77,027 | 65,330 |
| Korea, South | 13,957 | 4,714 | 2,971 | - | - |
| Lebanon | 3,279 | 3,484 | - | - | - |
| Morocco | - | - | - | - | - |
| Netherlands | 224,258 | 252,705 | 86,808 | 41,289 | 31,516 |
| New Zealand | - | - | - | 2,199 | - |
| Norway | 4,470 | 4,000 | - | - | - |
| Panama | - | - | - | - | 2,117 |
| Poland | - | - | - | 23,263 | 18,926 |
| Spain | 29,698 | 11,734 | 10,833 | 6,500 | 6,580 |
| Sweden | - | - | - | - | 72 |
| Switzerland | 3,193 | 10,739 | 1,906 | 1,237 | 108 |
| Syria | 749 | - | - | - | - |
| Trinidad-Tobago | - | - | - | - | 2 |
| United Kingdom | 61,122 | 46,902 | 49,841 | 31,337 | 15,573 |
| United States | 1,916 | 2 | 1,170 | 12,659 | 3,493 |
| TOTAL | 626,087 | 594,597 | 433,200 | 351,031 | 244,942 |
| Total Value ($'000) | 63,849 | 68,511 | 112,984 | 148,631 | 83,815 |

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 62

CANADIAN IMPORTS OF FLAXSEED

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Kenya | - | 2 | - | - | - |
| United States | 1/ | 15 | 86 | 451 | 337 |
| Total | 1/ | 17 | 86 | 451 | 337 |
| Total Value ($'000) | - | 3 | 25 | 333 | 171 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 63

QUALITY DATA FOR WESTERN CANADIAN FLAXSEED, SURVEY SAMPLES OF 1974 AND 1975 CROPS

| WESTERN CANADA | Oil Content[1] | | | Iodine Value | | | Protein Content[2] | | | No. of Samples | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1974/75[3] | 1974 | 1975 | 1974/75[3] | 1974 | 1975 | 1974/75[3] | 1974 | 1975 | 1974/75[3] |
| No. 1 CW | 43.9 | 42.1 | 43.3 | 195 | 188 | 193 | 41.3 | 42.6 | 39.4 | 197 | 246 | 985 |
| No. 2 CW | 43.7 | 42.2 | 43.0 | 198 | 188 | 197 | 38.1 | 42.4 | 38.6 | 49 | 33 | 77 |
| No. 3 CW | 41.6 | 41.4 | 40.8 | 198 | 188 | 195 | 34.4 | 43.8 | 36.3 | 31 | 11 | 18 |
| No. 4 CW | 33.4 | - | 34.4 | 196 | - | 191 | 28.6 | - | 27.4 | 2 | - | 1 |
| All Grades | 43.5 | 42.1 | 43.2 | 196 | 188 | 193 | 39.9 | 42.6 | 39.3 | 279 | 290 | 1,081 |
| ALL GRADES | | | | | | | | | | | | |
| Manitoba | 43.4 | 41.7 | - | 198 | 185 | - | 39.1 | 42.8 | - | 113 | 135 | - |
| Saskatchewan | 44.0 | 42.1 | - | 196 | 189 | - | 39.7 | 42.9 | - | 130 | 103 | - |
| Alberta | 42.3 | 43.2 | - | 189 | 195 | - | 43.0 | 41.4 | - | 36 | 52 | - |

1/ Oil Content of seed is reported on moisture-free basis.

2/ Protein Content is reported on oil-free meal and moisture-free basis.

3/ Crop year final.

SOURCE: Canadian Grain Commission, Crop Bulletin No. 129

TABLE 64

CANADIAN EXPORTS OF LINSEED OIL

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Bahamas | 1/ | 1/ | - | - | - |
| Barbados | 2 | 2 | - | - | - |
| Belgium-Luxembourg | - | - | - | - | 1,526 |
| Bermuda | 1/ | 1 | - | - | 1 |
| Ecuador | - | - | 1 | - | - |
| Germany, West | - | 711 | - | - | - |
| Guatemala | - | - | - | - | - |
| Jamaica | - | - | - | - | 1/ |
| Liberia | - | - | - | 2 | 2 |
| Netherlands | - | - | - | - | 1,590 |
| Netherlands-Antilles | - | - | - | - | - |
| Nigeria | - | - | 1/ | - | - |
| United Kingdom | 10,915 | 14,488 | 5,962 | 581 | 398 |
| United States | 76 | 839 | 96 | - | 36 |
| Venezuela | 12 | 40 | 18 | 8 | 7 |
| Total | 11,007 | 16,082 | 6,078 | 592 | 3,562 |
| Total Value ($'000) | 2,421 | 3,276 | 2,314 | 655 | 3,237 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 65

CANADIAN EXPORTS OF LINSEED CAKE AND MEAL

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Barbados | 816 | 816 | - | - | - |
| Belgium-Luxembourg | 307 | - | - | - | - |
| Denmark | - | 1,872 | - | - | - |
| Germany, West | 1,610 | 3,744 | - | - | - |
| Guyana | 2 | 5 | - | - | - |
| Leeward-Windward Is. | 176 | 124 | 4 | - | - |
| Netherlands | 5,493 | 3,173 | 1,873 | - | - |
| Trinidad-Tobago | 377 | 416 | 168 | 49 | 114 |
| United Kingdom | 2,261 | 4,852 | 2,313 | - | - |
| United States | 1,623 | 2,693 | 1,151 | 64 | 80 |
| Total | 12,669 | 17,699 | 5,511 | 114 | 194 |
| Total Value ($'000) | 1,046 | 1,398 | 822 | 24 | 37 |

SOURCE: Statistics Canada Catalogue No. 65-004.

TABLE 66

CANADIAN FLAXSEED PRICES[1/]

(Crop Year)

| MONTH | 1970/71 | 1971/72 | 1972/73 | 1973/74 | 1974/75 |
|---|---|---|---|---|---|
| | ..... | (Cents and Eighths per Bushel) | | | ..... |
| August | 269/2 | 234/6 | 305/7 | 878/7 | 1099/7 |
| September | 272/3 | 226/7 | 325/4 | 885/6 | 1172 |
| October | 263/5 | 243/2 | 357/7 | 898/6 | 1219/1 |
| November | 253 | 238/4 | 353 | 1018/5 | 1094/2 |
| December | 246/2 | 236/3 | 366/7 | 1060/5 | 1066/5 |
| January | 244/6 | 248/7 | 436/4 | 1122/6 | 922/4 |
| February | 249/4 | 259 | 535/6 | 1167 | 810/5 |
| March | 251/4 | 277/6 | 483/3 | 1107 | 784/1 |
| April | 257/2 | 285 | 478 | 967/3 | 861/3 |
| May | 248/7 | 271/2 | 552/6 | 991/6 | 825/6 |
| June | 245/5 | 277/2 | 701/7 | 979/5 | 779/7 |
| July | 242 | 288/1 | 895/6 | 1095/2 | 815/2 |
| Yearly Average | 253/5 | 257/2 | 482/6 | 1014/4 | 954/2 |

1/ Winnipeg Grain Exchange No. 1 C.W. Flaxseed, basis Thunder Bay.

SOURCE: Statistics Canada, Catalogue No. 22-006.

# CHAPTER 13

## OTHER INEDIBLE FATS AND OILS

Castor, tung and tall oils, tall oil pitch, tall oil fatty acids, chemically modified oils, fats and waxes and mixtures and derivatives of oils, fats and waxes comprise the other inedible fats and oils that are dealt with in this chapter.

Imports of castor oil continue to be at the level of recent annual shipments (Table 67). Brazil remains our major supplier, with a small quantity coming from the United States. The price this year averaged $612.68 compared with $746.62 in 1974 and $1,025.48 in 1973. In 1971 and 1972 the price per metric ton was relatively stable between $425.00 and $475.00.

Tung oil imports were up 50% over 1974 at 690 metric tons, the big increase coming from the United States (Table 68). The People's Republic of China dropped from being the major supplier to that of third in importance in 1975. Cost per metric ton decreased to $639.13 from $724.71 in 1974. These figures were considerably above the range of $235.00 to $425.00 of the early 1970's.

Canadian imports of tall oil, tall oil pitch and tall oil fatty acids remained at historic levels for 1975, with the United States being our only supplier apart from two metric tons from the People's Republic of China (Table 69). Average prices for these commodities followed the trend of other inedible oils last year dropping to $463.74 per metric ton from $502.22 in 1974. From 1971 to 1973 the average price fluctuated between $200.00 and $265.00.

Canada continues to import chemically modified oils, fats and waxes from a number of foreign countries (Table 70). The United States is our major supplier. However, the United Kingdom shipped a large quantity to Canada in 1975. On an average price per metric ton basis costs escalated to $1,183.76 in 1975 from $951.38 in 1974 and from the much lower level of $445.00 to $535.00 in 1971/72/73.

The United States supplied 98% of Canada's imports of mixtures and derivatives of oils, fats and waxes in 1975 with Brazil being a small new supplier (Table 71). Total imports were the smallest in five years. The trend in the

average price per metric ton approximates that of chemically modified oils, fats and waxes, i.e., $753.83 in 1975 from $670.01 in 1974 and the level of $420.00 - $455.00 in the early 1970's.

Canadian exports of chemically modified oils, fats and waxes showed a 50% increase in quantity in 1975 over 1974 but value declined by almost 50% (Table 72). The average price per metric ton obtained was $174.83 compared with $474.49 in 1974 and a range of $280.00 to $400.00 in the early 1970's. The United States continues to be our only major purchaser (97% in 1975).

TABLE 67

CANADIAN IMPORTS OF CASTOR OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Brazil | 2,377 | 2,023 | 2,401 | 1,529 | 1,697 |
| Colombia | - | - | 8 | - | - |
| United Kingdom | 2 | - | - | - | - |
| United States | 242 | 147 | 377 | 320 | 211 |
| Total | 2,621 | 2,170 | 2,787 | 1,850 | 1,908 |
| Total Value ($'000) | 932 | 1,035 | 2,858 | 1,646 | 1,169 |

SOURCE: Statistics Canada Catalogue No. 65-007

TABLE 68

CANADIAN IMPORTS OF TUNG OIL

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Argentina | 298 | 584 | 991 | 127 | 141 |
| Brazil | - | - | 14 | - | - |
| Paraguay | 314 | 229 | 57 | 42 | 56 |
| People's Rep. of China | 10 | 20 | 89 | 183 | 70 |
| United States | 259 | 189 | 88 | 70 | 423 |
| Total | 882 | 1,023 | 1,241 | 425 | 690 |
| Total Value ($'000) | 290 | 240 | 527 | 308 | 441 |

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 69

CANADIAN IMPORTS OF TALL OIL, TALL OIL PITCH AND TALL OIL FATTY ACIDS

(Metric Tons)

| | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| TALL OIL AND TALL OIL PITCH | | | | | |
| Netherlands | - | - | 4 | - | - |
| United States | 2,010 | 1,578 | 1,502 | 2,254 | 2,378 |
| TALL OIL FATTY ACIDS | | | | | |
| People's Republic of China | - | - | - | - | 2 |
| Switzerland | 1/ | - | - | - | - |
| United States | 6,629 | 6,912 | 5,807 | 4,715 | 5,053 |
| TOTAL | 8,640 | 8,490 | 7,314 | 6,969 | 7,433 |
| Total Value ($'000) | 1,796 | 1,718 | 1,931 | 3,500 | 3,447 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 70

CANADIAN IMPORTS OF CHEMICALLY MODIFIED OILS, FATS AND WAXES

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Brazil | - | - | - | 20 | 69 |
| Denmark | 6 | 1 | 1 | - | 1/ |
| France | 14 | 1/ | 1/ | 3 | - |
| Germany, West | 6 | 3 | 3 | 8 | 8 |
| Greece | 21 | - | - | - | 3 |
| Japan | - | - | 15 | - | - |
| Netherlands | 331 | 410 | 418 | 398 | 442 |
| Netherlands-Antilles | - | - | - | - | 23 |
| Switzerland | - | - | - | - | 1/ |
| United Kingdom | 44 | 30 | 419 | 55 | 1,125 |
| United States | 4,556 | 3,319 | 6,569 | 5,198 | 4,176 |
| TOTAL | 4,981 | 3,764 | 7,425 | 5,677 | 5,850 |
| Total Value ($'000) | 2,224 | 1,776 | 3,985 | 5,401 | 6,925 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 71

CANADIAN IMPORTS OF MIXTURES AND DERIVATIVES OF OILS, FATS AND WAXES

(Metric Tons)

| COUNTRY OF ORIGIN | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Belgium-Luxembourg | - | - | - | 1 | - |
| Brazil | - | - | - | - | 20 |
| France | - | 1/ | - | 3 | 6 |
| Germany, West | 90 | 362 | 41 | 103 | 98 |
| Japan | 1 | - | - | - | - |
| Netherlands | 2 | 1 | 2 | 1 | - |
| Sweden | - | - | 2 | - | - |
| United Kingdom | 141 | 197 | 147 | 66 | 153 |
| United States | 11,828 | 13,906 | 15,144 | 14,780 | 10,886 |
| Total | 12,063 | 14,468 | 15,338 | 14,958 | 11,163 |
| Total Value ($'000) | 5,095 | 6,079 | 6,996 | 10,022 | 8,415 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 72

CANADIAN EXPORTS OF CHEMICALLY MODIFIED OILS, FATS AND WAXES

(Metric Tons)

| DESTINATION | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Australia | 1/ | - | - | 1 | - |
| Bahamas | - | 1/ | - | 1/ | - |
| Barbados | - | - | - | - | 27 |
| Bermuda | 1 | 1/ | 1/ | - | - |
| Brazil | - | - | 22 | - | - |
| Cuba | - | 17 | - | - | - |
| Ecuador | - | 1 | - | - | - |
| France | 252 | 219 | - | 32 | 14 |
| Germany, West | 10 | 218 | 44 | 24 | 1/ |
| Guatemala | 1/ | - | - | - | - |
| Guyana | - | - | - | - | 1/ |
| Israel | - | - | - | - | 4 |
| Italy | - | 45 | 16 | - | - |
| Japan | 462 | 539 | 498 | 240 | 20 |
| Leeward-Windward Is. | 1/ | - | 1/ | - | - |
| Netherlands-Antilles | 1/ | 1 | - | 1 | - |
| New Zealand | 15 | - | - | - | - |
| Panama | - | - | 1/ | - | - |
| Peru | - | 2 | - | - | - |
| Sweden | 5 | - | - | - | - |
| United Kingdom | 953 | 587 | 19 | 36 | 18 |
| United States | 1,036 | 807 | 1,461 | 1,759 | 3,212 |
| Venezuela | 31 | 17 | - | 1 | 9 |
| TOTAL | 2,768 | 2,458 | 2,062 | 2,097 | 3,306 |
| Total Value ($'000) | 778 | 930 | 821 | 995 | 578 |

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004.

# CHAPTER 14

## SELECTED FINISHED PRODUCTS

Production of peanut butter responded to increased demand in 1975 showing a 4,000 metric ton gain over 1974 (Table 73). It would appear that in a period of rising food prices, consumers substitute peanut butter for other more expensive protein sources. One manufacturer entered the market with a well publicized new product which may have had the effect of increasing total sales. However, production of salad dressings and mayonnaise declined by a similar amount. Unfortunately, less than three manufacturers of sandwich spread were reporting to Statistics Canada for 1975 so no production figures are available. As the production of sandwich spread has been fairly constant over the past few years it is assumed that the figure would be in the range of 2,000 - 3,000 metric tons.

TABLE 73

CANADIAN PRODUCTION OF PEANUT BUTTER, SALAD DRESSINGS AND MAYONNAISE, AND SANDWICH SPREADS

(Metric Tons)

| PRODUCT | 1971 | 1972 | 1973 | 1974 | 1975 |
|---|---|---|---|---|---|
| Peanut Butter | 24,811 | 26,308 | 25,628 | 29,211 | 33,202 |
| Salad Dressings and Mayonnaise | 32,613 | 35,698 | 39,326 | 41,504 | 38,369 |
| Sandwich Spreads | 2,494 | 2,630 | 2,948 | 2,766 | x1/ |
| Total | 59,918 | 64,636 | 67,902 | 73,481 | - |

1/ Confidential to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 32-018

## CONVERSION FACTORS

### STATUTORY WEIGHT PER BUSHEL AND BUSHEL EQUIVALENT PER METRIC TON

| OILSEED | Pounds | Kilograms | Bushel Equivalent Per Metric Ton |
|---|---|---|---|
| Flaxseed | 56 | 25.402 | 39.368 |
| Soybeans | 60 | 27.216 | 36.744 |
| Rapeseed | 50 | 22.680 | 44.092 |
| Sunflowerseed | 30 | 13.608 | 73.487 |
| Mustardseed | 50 | 22.680 | 44.092 |

| OILSEED PRODUCTS | | Extraction Rate | Yield Per Bushel | Weight of Gallon |
|---|---|---|---|---|
| | | (Per Cent) | (Pounds) | (Pounds) |
| Flaxseed, | Oil | 35.4 | 19.8 | 9.3 |
| | Linseed Meal | 61.7 | 34.6 | - |
| Soybeans, | Oil | 17.7 | 10.6 | 9.2 |
| | Meal | 80.0 | 47.3 | - |
| Rapeseed, | Oil[1/] | 40.0 | 20.0 | 9.1 |
| | Meal | 57.5 | 28.75 | - |
| Sunflowerseed, | Oil[2/] | 40.0 | 12.0 | 9.2 |
| | Meal | 38.0 | 11.4 | - |
| Mustardseed,[3/] | Oil (Yellow) | 28 | - | - |
| | Oil (Oriental) | 40 | - | - |
| | Oil (Brown) | 36 | - | - |

1/ Rapeseed oil yields seem to have reached a fairly stable level of about 40 per cent on an "as received" basis. The previous factor of 37.5 per cent has been changed accordingly.

2/ The introduction of new sunflowerseed varieties has increased the oil yield on crushing to the 40 per cent level. The previous factor of 36 per cent has been changed accordingly. The meal yields continue to show fluctuations, and this factor has not been changed.

3/ Mustardseed is not crushed in Canada, and is primarily used for condiment purposes. Yellow, oriental and brown mustardseed varieties are grown in Canada, and the theoretical extraction rates reflect average oil contents of the seed, calculated on a dry basis.

OTHER PRODUCTS: Marine Oils: 1 Imperial gallon = 9.1 pounds.

INDUSTRY CANADA/INDUSTRIE CANADA
136669